

DELAWARE'S BAYSHORE BYWAY

November 2013



Corridor Management Plan

Delaware's Bayshore Byway

New Castle and Kent Counties, Delaware

Submitted to:

Delaware Department of Transportation

Division of Planning

Delaware Department of Natural Resources and Environmental Conservation

Division of Fish and Wildlife

Division of Parks and Recreation

Submitted by:

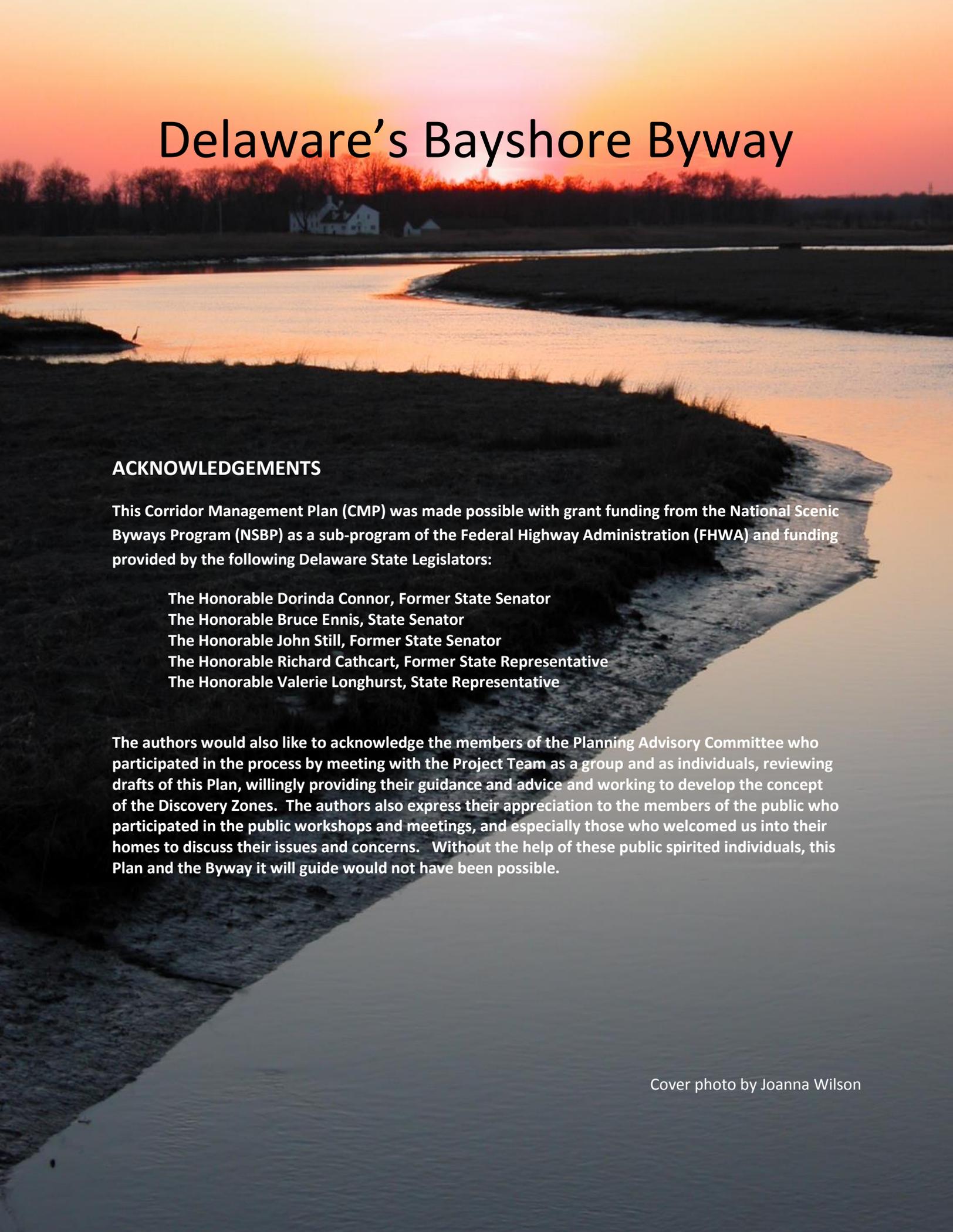
Delaware Greenways, Inc.

In association with

Truppi Consulting, LLC

November 2013

Delaware's Bayshore Byway



ACKNOWLEDGEMENTS

This Corridor Management Plan (CMP) was made possible with grant funding from the National Scenic Byways Program (NSBP) as a sub-program of the Federal Highway Administration (FHWA) and funding provided by the following Delaware State Legislators:

The Honorable Dorinda Connor, Former State Senator
The Honorable Bruce Ennis, State Senator
The Honorable John Still, Former State Senator
The Honorable Richard Cathcart, Former State Representative
The Honorable Valerie Longhurst, State Representative

The authors would also like to acknowledge the members of the Planning Advisory Committee who participated in the process by meeting with the Project Team as a group and as individuals, reviewing drafts of this Plan, willingly providing their guidance and advice and working to develop the concept of the Discovery Zones. The authors also express their appreciation to the members of the public who participated in the public workshops and meetings, and especially those who welcomed us into their homes to discuss their issues and concerns. Without the help of these public spirited individuals, this Plan and the Byway it will guide would not have been possible.

Cover photo by Joanna Wilson

ROLE OF THE GOVERNMENTAL AGENCIES WHO PARTICIPATED IN DEVELOPING THIS PLAN

Corridor Management Plans for Byways are designed to reflect the vision, goals and recommendations of the members of the general public participating in the development of the Plan. While DNREC, DelDOT and the other agencies participating with the public agree in principle with the Plan and its recommendations, it must be understood that these same agencies face many different and sometimes competing priorities, a changing regulatory framework, and funding challenges. As a result, the recommendations contained herein that are assigned to an agency for implementation may be implemented on a different schedule or in a different form than anticipated in the Corridor Management Plan or, due to unforeseen circumstances and regulatory requirements, not implemented at all. Nothing in this statement should be interpreted that any of the participating governmental agencies are withholding support of any of the contents of the Plan.



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CHAPTER 1 INTRODUCING THE BYWAY



1.0 OVERVIEW OF THE BYWAY

The Delaware Bayshore is widely recognized as an area of global ecological and historic significance. It is a ***Migratory Shorebird Site of Hemispheric Importance***, a ***Wetland of International Significance*** and an ***Important Bird Area of Global Significance***. Its expansive coastal marshes, sandy shoreline, forest, fields and agricultural lands provide habitat for more than 400 species of birds and other wildlife. The Nature Conservancy and the National Audubon Society recognize the region as globally significant wildlife habitat. The Nature Conservancy has called the Delaware Bayshore “one of the Earth’s most important stopovers for migratory birds.” The small towns along the Delaware Bayshore enjoy a deep and rich heritage, which evolved from the early colonial settlements and thriving maritime industries that thrived on the abundant natural resources of the area.



Today, more than 115,000 acres of the Delaware Bayshore are protected as state wildlife areas and state parks, national wildlife refuges, national estuarine reserves, private conservation lands, agricultural preserves and cultural heritage sites. The Delaware Bayshore area is a natural treasure in the middle of the heavily populated mid-Atlantic corridor. With more than 30 million people living within a three-hour drive, the Bayshore provides low-impact access to a premier wildlife and historic destination. Appropriate marketing and promotion of this area could support business growth and



create new opportunities for ecotourism within the Bayshore. It is within this context that the State and Bayshore communities have embarked on and supported two major federal efforts: The Delaware Bayshore Initiative – part of the U.S. Department of Interior’s America’s Great Outdoors Initiative – and the Delaware’s Bayshore Byway, part of the U.S. Department of Transportation, Federal Highway Administration’s National Scenic Byways Program. These initiatives – and all of the partnerships they are building – are working together to protect, preserve and promote Delaware’s Bayshore region. The two efforts are strongly synergistic and are fully integrated with each other.

1.1 THE ROADS OF THE BYWAY

The Delaware’s Bayshore Byway extends for 52 miles from the City of New Castle in New Castle County, DE to its junction with State Route 1 east of Dover on the east side of the Dover Air Force Base. It includes two spurs of 2.5 miles each. The first one connects the Village of Odessa to the Byway via State Route 299. The second is a loop consisting of Kitts Hummock Road and Bergold Lane that connects the

Byway to the John Dickinson Plantation, St. Jones Reserve and the Ted Harvey Conservation Area. Figures 1-1 and 1-2 illustrate the roadways of the Byway. Route 9 is an amalgam of roadways with different local names that loosely parallel the Bayshore. Chapter 4 contains a detailed description of each of the roadways of the Delaware's Bayshore Byway.

1.2 THE BYWAY STORY

Delaware's Bayshore Byway is a meandering road that connects nine major publicly owned natural areas, bucolic farms, and nine coastal towns and along the way, provides many scenic water-based vistas as it links all of these features together¹. The story of the Delaware's Bayshore Byway is about making a conscious decision to get off the crowded bustling highway of modern America and letting your senses take in the majesty and power of Mother Nature in the wildlife areas and coastal communities of Delaware's Bayshore: ***Welcome to Delaware's quieter and wilder side.*** The Byway is only a few miles away from I-95, one of the nation's busiest highways that serve millions of people from the mid-Atlantic region and the Washington D.C. – New York City megalopolis corridor. The Byway runs parallel to Delaware State Route 1, which connects Delaware's two largest cities, Wilmington and Dover, to the world-renowned Atlantic Ocean resort areas of Delaware's Coastal Sussex County. Although the majority of people speed along these major roadways, some residents and travelers choose to leave the highway and take in the Route 9 experience – "**The road less traveled**".

The Byway is defined by water. The Delaware River and Bay border the eastern edge of the Bayshore, with salt, brackish and freshwater marshes and many rivers and streams of the coastal plain intersecting the Byway corridor. Historically, water provided an easy mode of transportation, an abundance of food and a key ingredient for agriculture. The coastal plain's rich natural resources supported human beings populating the area for over 12,000 years. The area nurtured Native Americans, and then with the advent of the new world exploration, settlers populated the easily accessible land. They fished the waters, and they farmed the land. Small towns grew as water-dependent commerce developed. Over time the villages and hamlets were connected by a series of coastal roads, which today form the Byway. As Delaware transitioned from a rural to industrial economy and water transportation gave way to railroads and the automobile, Route 9 became a sleepy meandering road often cited as an experience in serenity. Without the efforts of courageous citizens and a responsive State government, the future of the Bayshore could have been dramatically different.

¹ Press Release documenting May 29, 2012 inauguration ceremony of Delaware's Bayshore Initiative. Speaking at the inauguration were U.S. Senators Tom Carper and Chris Coons, Congressman John Carney, Governor Jack Markel, U.S. Department of the Interior Secretary Ken Salazar, DNREC Secretary Collin O'Mara, DeIDOT Secretary Shailen Bhatt and Bowers Beach Mayor Ron Hunsicker.

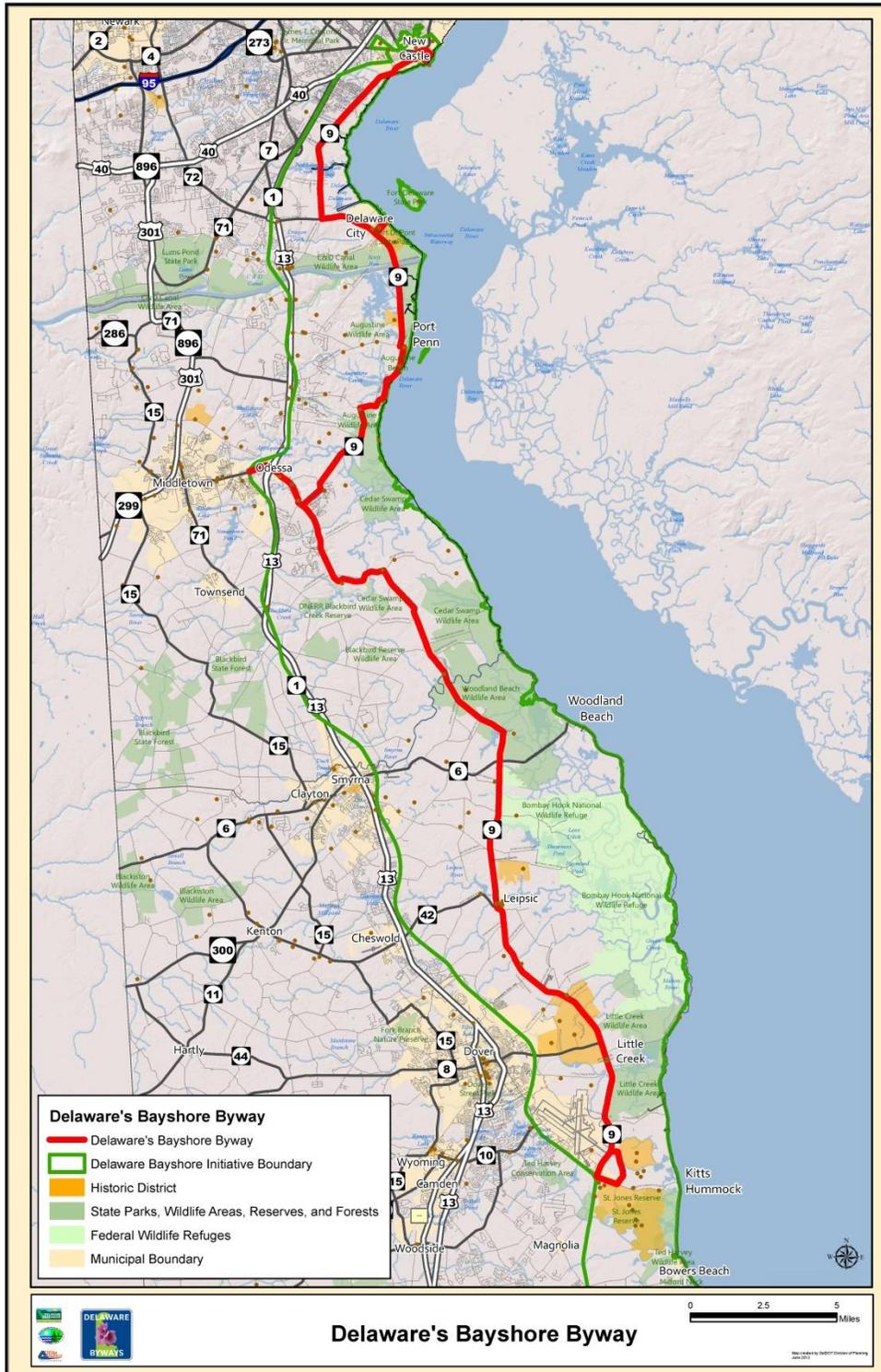


Figure 1-1: Byway Map

The Byway and Bayshore area owe their current existence to more than 80 years of preservation and conservation efforts beginning in the early 20th century. Led by local residents, non-profit organizations and state government, these efforts continue to this day. On March 16, 1937, the Bombay Hook National Wildlife Refuge was established along the eastern Bayshore of Kent County as a refuge for breeding migratory and wintering waterfowl along the Atlantic Flyway. Beginning at 12,177 acres at its founding, through land acquisition, it has grown to 16,251 acres. Due to the courageous conservation efforts of private citizens and State government during the 1960s and early 1970s, the Bayshore was saved from becoming the premier supertanker port and industrial center of the east coast. Today, the Delaware's Coastal Zone Act of 1971 and the Delaware Wetland Act of 1973 protect tidal wetlands. Kent County and New Castle County land-use policies now regulate activities that could potentially destroy the wetlands and encourage overdevelopment. Even as early as 1965, the Delaware State Highway Department prepared a report on Route 9 recommending the route as a scenic highway. The Route 9 corridor was finally nominated as a State Scenic Byway in 2007. What once was destined to become an industrialized coastland is now a unique collection of coastal towns, active farming communities, and globally significant natural areas accessible to the public.

Today the area faces new challenges. The coastal region is strongly affected by global climate change and sea-level rise (SLR) threatening the area with increasingly frequent flooding and damage from intense storms². The Byway and Bayshore strategies being developed to enhance the area as a natural attraction promoting ecotourism are strongly aligned with the State's efforts to describe current and anticipate impacts from sea-level rise and climate change. The story of this Byway is inextricably linked to the story of SLR – not just tomorrow, but now. SLR is one major reason that the Bayshore concept was conceived – there are significant habitat protection and restoration challenges presented by SLR, not to mention impacts to vulnerable infrastructure and communities. And yet we need to begin adapting the Bayshore and ensure it retains its character and conservation value even if it looks different to future generations than it does to us today.



Standing water on Route 9 occurs not only after storms but also after a full or new moon tide.

1.3 BYWAY CONCEPT

Developing the concept of the Byway was strongly governed by the vision of key stakeholders for the area. The coastal towns wanted to enhance their economic viability by very selectively developing tourist attractions that are in alignment with their history and their future vision for the area. Many of the large landowners wanted to keep the area “as is”, maintaining the existing roadside and community

² See Chapter 4 for a description of how the State of Delaware is developing plans to manage and adapt to the impacts of global climate change through the ongoing work of the Sea Level Rise Advisory Committee. Beginning in mid-2013, adaptation recommendations will be issued for public discussion and consideration leading to a statewide adaptation strategy.

character. The State and Federal agencies responsible for managing the public lands wanted to enhance public access and use of natural areas in ways that are compatible with protecting sensitive habitats and wildlife. All members of the Planning Advisory Team strongly supported keeping (and enhancing) the Byway experience as “the road less traveled”.



CMP Workshop Held December 2012 in Delaware City

In working with the various stakeholders the Discovery Zone concept was developed. Discovery Zones direct enhancements and activity to areas capable and desirous of supporting eco-tourism activity while maintaining the byway character. For the visitor, Route 9 serves two purposes. First, it is the Byway spine, providing access and directing activity into ten Discovery Zones. Second, it offers a quiet journey back to a less developed time with many natural and historic scenic vistas from its pastoral roadside. Discovery Zones are small towns and natural areas of concentrated attractions and potential new enhancements. Each Discovery Zone has defined a plan with a strategic vision designed to retain the uniqueness of the Discovery Zone yet in alignment with that of the Bayshore area. The Discovery Zones are listed below with their major venues and are described in detail in Chapter 3.

1. *New Castle*: Includes the City of New Castle, the New Castle Historic District and Historic Penn Farm
2. *Delaware City*: Includes Delaware City, Fort Delaware and Pea Patch Island, Fort DuPont and the C & D Canal
3. *Port Penn/Augustine*: Includes Augustine Wildlife Area and the Village of Port Penn
4. *Odessa*: Includes the Town of Odessa and the Odessa Historic District
5. *Cedar Swamp/Blackbird Creek*: Includes the Cedar Swamp Wildlife Area and Blackbird Creek Reserve
6. *Woodland Beach*: Includes Woodland Beach Wildlife Area and the Village of Woodland Beach

7. *Bombay Hook*: Includes the Bombay Hook National Wildlife Refuge
8. *Leipsic*: Includes the Town of Leipsic and the Leipsic River
9. *Little Creek*: Includes the Little Creek Wildlife Area, Town of Little Creek, Port Mahon and Pickering Beach
10. *St. Jones Neck*: Includes St. Jones Reserve, John Dickinson Plantation, Ted Harvey Wildlife Area and the Village of Kitts Hummock

1.4 BYWAY PROJECT PROCESS

In a public process led by Delaware Greenways in partnership with DNREC and the Delaware Department of Agriculture, the Route 9 corridor was nominated and accepted as the Route 9 Coastal Heritage Scenic Byway in 2007. The nomination document, which includes a detailed inventory of all the natural, historic and cultural attributes, defined Route 9 as “the essence of Delaware”. It described the byway as “50 miles of road between the Colonial Court House in the City of New Castle and the John Dickinson Plantation” that parallels the western shore of the Delaware Bay winding past a succession of uniquely Delaware landscapes.³

In March 2010, Delaware Greenways initiated the public outreach process to develop the CMP for the Byway, forming a Project Advisory Committee of community leaders and focus groups centered on the coastal towns. In all, as shown in Table 1-1, 17 meetings were held during the period of March 2010 through August 2010.

Table 1-1: 2010 Meeting Tabulation

| Date | Group | Significance |
|-------------------|---|--|
| March 31, 2010 | Project Advisory Committee Meeting | CMP Process introduction, visioning exercise, issue listing and prioritization |
| May 20, 2010 | Project Advisory Committee Meeting | Review results of the first PAC meeting and considered next steps |
| March-August 2010 | Conducted 15 meetings with focus groups in New Castle, Delaware City, Port Penn, Leipsic, and Little Creek. | Established the byway challenges and opportunities and refined the issues of concern |

These meetings produced a very mixed reaction from the stakeholders about the future direction of the byway. A number of the stakeholders, primarily leaders of Discovery Zone areas such as New Castle, Delaware City, and St. Jones Neck were enthusiastic about an eco-tourism focus. A number of the residents along the central corridor of the byway were very concerned about increased tourism and government regulation threatening the agricultural industry along the Route 9 corridor. As a result, the CMP process became dormant for a period of time, as Delaware Greenways continued to work directly

³ Delaware Greenways, et.al, Route 9 Coastal Heritage Scenic Byway, Delaware Scenic and Historic Highway Nomination, November 2006, page 1.



with the stakeholders to develop a strategy that would more broadly meet the needs and concerns expressed by the diverse stakeholders.

In January 2012, Delaware Governor Jack Markell announced in his State of the State address⁴ that Delaware would be launching a DNREC-led effort, the Bayshore Initiative, to enhance the state’s spectacular coastal region and boost the economy by restoring critical wildlife habitat and improving access to world-class outdoor experiences. The goals and objectives of the Bayshore Initiative were strongly synergistic with those of the Delaware’s Bayshore Byway. In March 2012, Collin O’Mara, Secretary of the Department of Natural Resources and Environmental Control met with Delaware Greenways leaders to request that the two programs be strongly coordinated and, where appropriate, integrated. The combined programs excited the stakeholders and launched an effort to complete the CMP.

To ensure effective integration of the two efforts, a steering team of Delaware Greenways, DNREC, DeIDOT and Truppi Consulting was formed and tasked to lead the development of the CMP in a way that met the objectives of both programs. Through a number of meetings with residents, presentations at town council meetings, a Government Stakeholders Team and Project Advisory Committee (PAC), and a public meeting, the project Steering Team developed “**The Byway Discovery Zone**” concept as a management framework for developing the byway. Branding and positioning Delaware’s Bayshore locally, regionally, nationally and globally and fitting the Byway within the envelope of the Bayshore brand has emerged as a key strategy for the Byway’s future. The key milestone meetings conducted during 2012 and 2013 are shown in Table 1-2.

Table 1-2: Key Milestones in Byway CMP Process

| Date | Group | Significance |
|------------------|---|---|
| March 12, 2012 | Meeting Collin O’Mara, Secretary DNREC | Established partnership between Byway and Bayshore Initiative; established key DNREC contacts for Byway CMP. |
| May 29, 2012 | Press Conference to Launch the Bayshore Initiative | Department of the Interior (DOI) and DNREC to officially launch Delaware’s Bayshore Initiative |
| June 11, 2012 | Government Stakeholders Meeting | Representatives of DE government agencies discussed, developed and endorsed strategies for the Byway |
| July – Sept 2012 | Meetings with private individuals, town councils (Leipsic, New Castle), town representatives (Odessa, Little Creek, DE City, Port Penn) | Identified specific goals for the coastal byway towns and landowners; developed/gained support for Discovery Zone concept and champions |
| July 25, 2012 | Kent County Tourism meeting: Hospitality Community update | Presented Byway program to the diverse public/private group involved in DE Tourism |

⁴ January 19, 2012 State of the State Address: <http://news.delaware.gov/2012/01/19/state-of-the-state-2012-transcript-delawares-time-to-lead/>



Table 1-2: Key Milestones in Byway CMP Process

| Date | Group | Significance |
|---------------|---|---|
| Sept 20, 2012 | Project Advisory Committee Meeting | PAC reviewed draft strategic direction, endorsed Discovery Zone concept and defined key priorities for the CMP (30 people) |
| Oct 23, 2012 | Byway/Bayshore meeting w/ DNREC/DelDOT/ Delaware Economic Development Office (DEDO) | Started positioning/branding discussion and process |
| Dec 4, 2012 | Kent County Levy Court | Presented the Bayshore/ Byway project and plans to Kent County Government officials |
| Dec 15, 2012 | Byway Public Meeting in Delaware City | Presented Byway CMP to the public. Gained strong buy-in for Discovery Zone concept; established Byway priorities (about 38 people in attendance) |
| Feb 20, 2013 | DNREC Bayshore Initiative Meeting at St. Jones Reserve | Byway / Bayshore action plans and priorities were discussed at a broad agency meeting |
| June 4, 2013 | Project Advisory Committee Meeting | Reviewed Draft CMP, approved CMP cover, recommended name change to Delaware’s Bayshore Byway and set the foundation for a Byway Management Organization |

1.5 CMP PRINCIPLES, VISION, GOALS AND NEAR-TERM ACTIONS

Through the process of working with the Project Advisory Committee and key stakeholders, the following principles, vision, goals and near-term actions were established for the Byway:

Byway Principles

The following guiding principles brought the stakeholders together in a collaborative effort resulting in this CMP.

- Recognize, celebrate and promote the Byway as an internationally recognized treasure. As such, support protection of natural areas, wetlands, wildlife and while creating opportunities for Delawareans and visitors to experience the natural wonders, the unique coastal towns and historic sites of the Bayshore area.
- Respect and collaborate with stakeholders including landowners, individuals, organizations, towns, villages and communities that have worked to preserve the corridor.
- Promote the Bayshore stories so that residents and visitors



A typical street scene in historic New Castle

can enjoy and engage with the unique features of the corridor while enhancing the economic opportunities of the area so that the residents, businesses and visitors will benefit.

Vision

It is our vision that we will leave for future generations a healthy, globally important landscape that supports a variety of habitats and an abundance of wild plants and animals – even in the face of climate change and sea level rise – connected by a Byway that provides access to where people today and in the future can visit and have an excellent quality outdoor experience through hunting, fishing, birding, kayaking, hiking or simply to enjoy a peaceful scenic view, all the while strengthening and preserving the history and the livelihoods of the people of Delaware’s coastal communities.

Mission

Develop a partnership of citizens, their communities and government that will preserve, protect and enhance this globally important area of ecological and historical importance for future generations to learn about and enjoy and coexist with nature, to honor the efforts, both public and private, to secure the Bayshore for future generations all the while respecting the people who reside and earn sustenance from the land and the water of the Bayshore.

Goals

Working with the Project Advisory Committee, seven goals were established. Within each goal, a set of action items are defined to guide the CMP. The goals are:

1. Brand and position Delaware’s Bayshore locally, regionally, nationally and globally and fit the byway within the envelope of the Bayshore brand. Use the Discovery Zone concept to highlight ten hubs of activity along the byway while retaining the “road less traveled” environment along the Route 9 road corridor.
2. Conserve the natural environment by partnering with residents, organizations and government entities to protect and preserve the working landscape, natural qualities, critical scenic viewsheds, the communities and other vital assets in the Bayshore corridor.
3. Support community aspirations by providing guidance and assistance so the Bayshore corridor communities can be successful within the framework that best serves each community. Catalyze partnerships among the coastal communities/Discovery Zones.



Route 9 near Port Penn

4. Enhance access to and use of the Bayshore natural area Discovery Zones with improved facilities, programming, signage and way-finding while respecting the wildlife conservation mission of these areas.
5. Maintain the context, safety and character of Route 9 by ensuring that the road corridor is safe for all users – drivers, cyclists, walkers, birders and farmers and by ensuring that there is appropriate environmentally sensitive access to key attractions and Discovery Zones while respecting the residents' strong interest in maintaining the local character of the road.
6. Work with the education community to engage the residents and visitors of all ages in a learning experience about the Bayshore to ensure that current and future generations will continue to experience the Bayshore story and become the stewards for sustaining it.
7. Manage the Byway as an ongoing enterprise to:
 - a. implement the CMP,
 - b. advocate for, protect and enhance the Byway through coordination among stakeholders and other key partners; and,
 - c. ensure that the varied interests along the byway are respected.



A fox eyeing the cameraman taking his picture

Near-Term Action Items

As the byway process transitions to its implementation phase and to its Management Organization, five key priority action items have been identified.

1. Catalyze a private –public partnership to initiate the Bayshore branding and positioning study and develop an initial promotional campaign. Consider requesting Bond Bill funds to start this activity.
2. Form and facilitate a team to evaluate and catalyze increased use of the waterway assets for ecotourism.
3. Through DNREC, develop an access and enhancement plan for each of the Discovery Zone natural areas that guides and integrates the wildlife-viewing opportunities in the 2012 Byways grant.
4. Implement the DNREC Byways grant to enhance and improve wildlife areas.

5. Advocate for and support economic-development efforts of the coastal towns and, as appropriate, facilitate partnerships to leverage the efforts of the coastal towns.

1.6 BYWAY MANAGEMENT STRUCTURE

Upon completion of the CMP, the recommendations for the management plan and structure are that the Byway Project Advisory Committee will transition to the Byway Management Team (BMT) with the aid of a not-for-profit organization like Delaware Greenways to facilitate the processes of the team. Over time, it is very likely that the Byway Management Team will be integrated into the governing processes for the Delaware Bayshore Initiative. The leadership team will have the following objectives:

1. Implement the CMP.
2. Advocate for, protect and enhance the Byway through coordination among stakeholders, interested parties, projects and actions undertaken and sponsored.
3. Act as the forum to coordinate, synergize, and advance the varied interests along the Byway.

Key actions required for this transition are to gain agreement with members of the Project Advisory Committee and others to serve on the BMT, and identify appropriate funding sources to sustain the BMT and the implement the Action Items called for in the CMP.

1.7 NATIONAL SCENIC BYWAYS PROGRAM REQUIREMENTS

Key stakeholders and State Government leaders have recommended that the CMP be developed with the goal that the Byway is eligible for nomination as both a National Scenic Byway and All American Road. As part of this effort, the Delaware Bayshore Byway considers the possibility of extending and linking with New Jersey's Bayshore Heritage Byway as a multi-state byway across and around the Delaware Bay. It will potentially include a southern extension in Delaware to the Cape May–Lewes Ferry, Cape Henlopen State Park and the Lewes Historic Byway: Gateway to a Nation. Such a linkage would encircle the entire Delaware Bay and linking the communities and natural areas that make the area unique.

The National Scenic Byways Program is part of the U.S. Department of Transportation, Federal Highway Administration. It was established in Title 23, Section 162 of the United States Code under the Intermodal Surface Transportation Efficiency Act of 1991 and reauthorized and expanded significantly in 1998 under TEA-21 and again under SAFETEA-LU in 2005. This legislation outlines the policies, procedures and requirements for a road or highway to be designated in this Federal Highway Administration program. In 2012, Moving Ahead for Progress in the 21st Century Act (MAP-21), the National Scenic Byways Program was shifted within the Transportation Alternatives Program.

Roads can be designated as National Scenic Byways or All American Roads. Delaware's Bayshore Byway meets all of the following requirements for All American Road Designation as illustrated in Table 1-3. Each check mark below indicates where this byway meets the program criteria.

Table 1-3 Program Criteria for National Scenic Byways and All-American Roads

| No. | Program Criteria | National Scenic Byway | All American Road |
|-----|---|-----------------------|-------------------|
| 1 | State Scenic Byway Designation | ✓ | ✓ |
| 2 | Accommodate 2-wheel drive vehicles | ✓ | ✓ |
| 3 | Accommodate where feasible bicycle and pedestrian travel | ✓ | ✓ |
| 4 | Accommodate conventional tour buses. | N/A | ✓ |
| 5 | Complete a CMP | ✓ | ✓ |
| 6 | Demonstrate enforcement mechanisms by byway communities | N/A | ✓ |
| 7 | Available user facilities for travelers are in place | ✓ | ✓ |
| 8 | Plan to accommodate increased tourism | N/A | ✓ |
| 9 | Plan to address multi-lingual information | N/A | ✓ |
| 10 | Be continuous and minimize intrusions of the visitor experience | ✓ | ✓ |
| 11 | Have two intrinsic qualities | N/A | ✓ |
| 12 | Have one-of-a-kind features | N/A | ✓ |
| 13 | Narrative to promote, interpret and market byway to attract international travelers | N/A | ✓ |
| 14 | Demonstrates that it is a destination unto itself | N/A | ✓ |

This CMP meets all 14 requirements of the National Scenic Byways Program as illustrated in Table 1-3 for an All-American Road. As shown in Table 1-4, the CMP requirements are the same for National Scenic Byway and All American Road designations.

Table 1-4 Corridor Management Plan Requirements

| No. | Corridor Management Plan Requirements | National Scenic Byway | All American Road |
|-----|--|-----------------------|-------------------|
| 1 | Map of corridor boundaries | ✓ | ✓ |
| 2 | Assessment of the Intrinsic Qualities and their context | ✓ | ✓ |
| 3 | A strategy for maintaining and enhancing the Intrinsic Qualities (CMP Enhancement Plan) | ✓ | ✓ |
| 4 | An Implementation Schedule | ✓ | ✓ |
| 5 | A strategy describing how existing development will be enhanced and new development will be accommodated while preserving the Intrinsic Qualities (CMP Enhancement Plan) | ✓ | ✓ |
| 6 | A Public Participation Plan | ✓ | ✓ |
| 7 | A review of highway's safety and accident record | ✓ | ✓ |
| 8 | A plan to accommodate commerce and user facilities while maintaining safe traffic and transportation | ✓ | ✓ |



Table 1-4 Corridor Management Plan Requirements

| No. | Corridor Management Plan Requirements | National Scenic Byway | All American Road |
|-----|--|-----------------------|-------------------|
| 9 | A visitor experience plan to demonstrate intrusions have been minimized and improvements have enhanced the experience (CMP Marketing, Development and Economic Development Plan) | ✓ | ✓ |
| 10 | Compliance with outdoor advertising laws | ✓ | ✓ |
| 11 | A Sign Plan | ✓ | ✓ |
| 12 | A Marketing Plan | ✓ | ✓ |
| 13 | Context Sensitive design standards | ✓ | ✓ |
| 14 | An Interpretive Plan | ✓ | ✓ |

1.8 NAVIGATING THE CMP

The CMP consists of five chapters designed to highlight why the Byway stands apart and how to maintain and enhance its uniqueness.

In Chapter 2, titled, **“Describing the Byway Corridor”**, the Byway story unfolds. It recounts how nature shaped this region and the history of those who lived and worked here. It also describes the significance of the legacy and the foresight of Delaware’s leaders and the people who make this area so special who gave us the gift of the Delaware Bayshore and the Byway that connects it.

The Byway and its spurs cover a length of 57 miles. While there are many common features of the Byway and the Bayshore, each of the communities and natural areas has a different personality with unique features, stories and individual considerations. Chapter 3, titled, **“Introducing Delaware’s Bayshore Initiative and the Byway’s Discovery Zones**, introduces both the State’s Bayshore Initiative and the concept of the Discovery Zones. It also tells the story of each Discovery Zone and the aspirations each of the Discovery Zones are pursuing and seek to pursue independent of and along with the Byway.

The agencies of state and county government have responsibilities for elements of the byway corridor and have tools that influence the Byway region and contribute to the way it is today. By identifying these tools and how they can be used to preserve the Byway and the Bayshore, the Byway Management Entity can better implement its recommendations partly in coordination with these key stakeholders. Chapter 4, titled **“Examining the Corridor Context”**, outlines these tools and summarizes the conditions of the Byway.

Chapter 5, titled **“Preserving and Enhancing the Byway”**, considers the vision, mission, goals and challenges outlined in the previous chapters and develops strategies and recommendations to address each. From the recommendations and strategies, a priority action list assigns implementation responsibilities along with a timeline.





Delaware's Bayshore Byway

CHAPTER 1 – INTRODUCING THE BYWAY



CHAPTER 2 DESCRIBING THE BYWAY CORRIDOR



2.0 INTRODUCTION

The designation of Delaware's Bayshore Byway began with an application to the Delaware Scenic & Historic Highway Program in 2007. So much has happened since 2007 that it is appropriate to supplement and augment the compelling story of the Bayshore told in that application. The depth and dimension of the story makes clear the significance of the Delaware Bayshore as a state, national and global destination. This chapter also summarizes and updates the Byway Corridor by documenting its intrinsic qualities, identifying changes that have occurred since the nomination, and filling in any gaps to further define the Corridor Characteristics today. Most importantly, it reflects the new association with the Department of Natural Resources and Environmental Control (DNREC)'s Bayshore Initiative as a noteworthy factor and addition to the Byway story, and its significance and potential.

"Route 9 is taking that Sunday drive any day of the week. It's like therapy. Take your time, roll down the windows, turn the radio off and enjoy the ride. Better yet, get on your bicycle."

"Take the Long Way Home"
Steve Renzi
<http://byways.org/stories/74413>

2.1 STATEMENT OF SIGNIFICANCE

Delaware's Bayshore Byway travels through and serves an extensive and contiguous area of conserved coastal marshes and shoreline on the eastern seaboard – **The Delaware Bayshore**. The Byway is located in the lower portion of the Delaware Estuary, a fragile ecosystem that stretches from Trenton, New Jersey, and Morrisville, Pennsylvania, south to Cape May, New Jersey, and Cape Henlopen, Delaware, including all of the Delaware Bay and the tidal reaches of the Delaware River.¹ The Byway corridor travels through a network of rivers and streams that meander to the Delaware River and Bay, state and national wildlife areas, pastoral farmland, picturesque coastal towns, and historic attractions. It is rich with natural and historic resources including:

- Two State Parks ripe with history and natural resources: Fort Delaware State Park and Fort DuPont State Park
- Two city parks offering great views of the Delaware River: Battery Park in New Castle and Battery Park in Delaware City



Figure 2-1: The Delaware Estuary,
Credit: Partnership for the Delaware Estuary

¹ Partnership for the Delaware Estuary, www.delawareestuary.org

- Seven State Wildlife Areas: C&D Canal Wildlife Area, Augustine Wildlife Area, Cedar Swamp Wildlife Area, Blackbird Reserve Wildlife Area, Woodland Beach Wildlife Area, Little Creek Wildlife Area, and Ted Harvey Conservation Area
- Two components of the Delaware Natural Estuarine Research Reserve (DNERR): Blackbird Creek Reserve and St. Jones Reserve.
- One National Wildlife Refuge (NWR): Bombay Hook NWR.
- Nine Historic Districts: New Castle, Delaware City, Fort DuPont, North St. Georges, Ashton, Port Penn, Odessa, Raymond Neck, and Little Creek Hundred.
- Six museums: In New Castle: Old Library, Court House, and Read House and Gardens. In Port Penn: Port Penn Interpretative Center. At Dover Air Base: Air Mobility Command Museum and nearby is the John Dickinson Plantation.

The Bayshore is widely recognized as an area of global ecological significance. Its expansive coastal marshes, sandy shoreline, forest, fields and agricultural lands provide habitat for more than 400 species of birds and other wildlife. Birders and biologists from around the world come to central Delaware's Bayshore to witness the annual spring spectacle of more than **a half million shorebirds** taking a rest stop to dine on the eggs of horseshoe crabs. Delaware Bay has the world's largest population of horseshoe crabs and their eggs, deposited along the high tide line of Delaware beaches, provide food for vast flocks of shorebirds, such as red knots. In addition, the Bayshore has been recognized by the following:

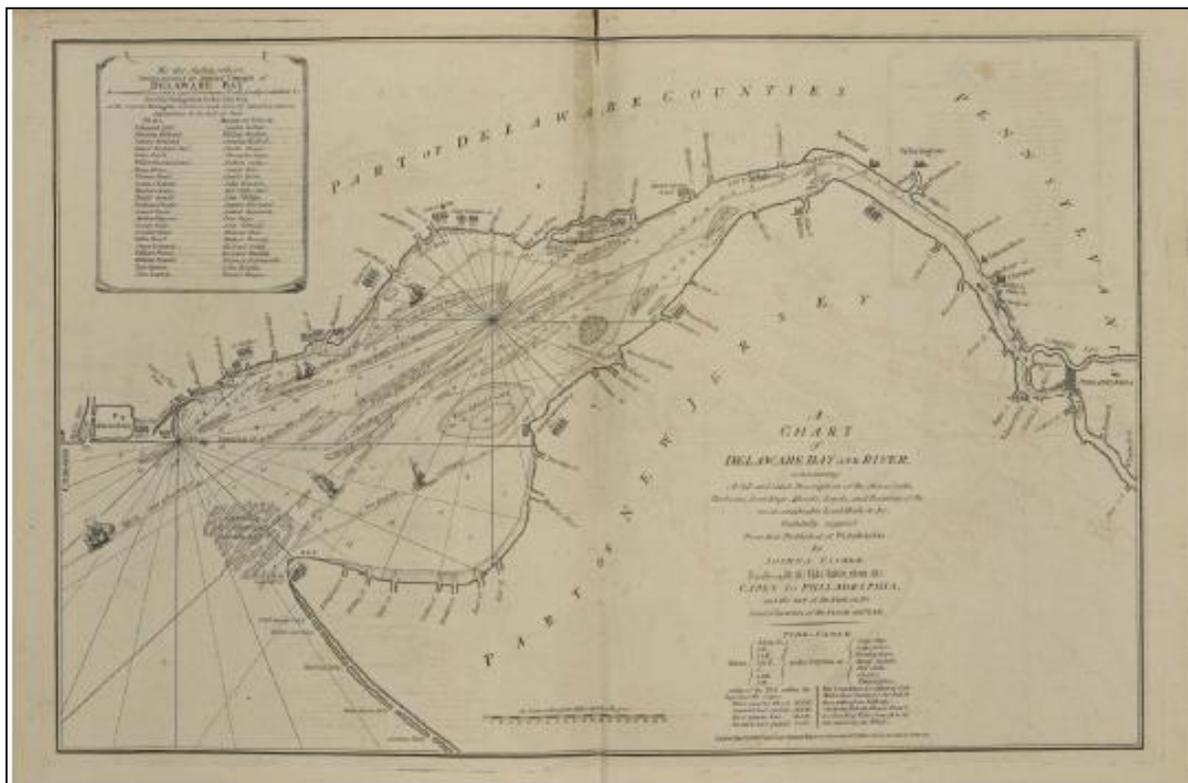
Some studies suggest that nearly 80% of the red knot population stops at Delaware Bay to refuel on horseshoe crab eggs before continuing on their epic journey north. It is no wonder Delaware Bay is recognized as a "Site of Hemispheric Importance to Shorebirds".

*Wetlands Institute, Delaware Bay
Horseshoe Crab Census*

- In 1986, Delaware Bay joined the Western Hemisphere Shorebird Reserve Network as a Site of Hemispheric Importance due to the sheer number of shorebirds that use the bay as a migratory stopover – over a half million annually.
- In 1992 the Delaware Bay Estuary was designated as a Wetland of International Significance by the Ramsar Convention on Wetlands because it provides critical resting and feeding areas for migratory shore and wading birds.
- The National Audubon Society, working with criteria and standards provided by BirdLife International, recently recognized the Delaware Coastal Zone as an Important Bird Area of Global Significance – the highest possible designation – for its critical role in the life cycle of multiple imperiled species, including Red Knot, Black Rail, Saltmarsh Sparrow and Piping Plover.

Opportunities for outdoor recreation close to nature abound. The area provides a window into 400 years of coastal community civilization living in harmony with nature, yet it remains just a quiet drive away from the noise and hassles of modern society. Due to the courageous conservation efforts of private citizens and State government during the 1960s and early 70s, the Bayshore was saved from becoming a major supertanker port and industrial center of the east coast when the Coastal Zone Act was established and signed into law in 1971. In 2012, the DNREC launched the “The Delaware Bayshore Initiative” to spur conservation, recreation and eco-tourism in the Bayshore area. This effort has received national recognition and has become part of the U.S. Department of Interior’s “America’s Great Outdoors Initiative”. Delaware’s Bayshore Byway, with over 52 miles of continuous road and with its ten Discovery Zones, provides access to the many natural, historical and recreational features of Delaware’s Bayshore.

New Jersey’s 122-mile Bayshore Heritage Byway and Coastal Heritage Water Trail present potential bi-state programs for Delaware to expand this Byway regionally along the Delaware River and around the Delaware Bay. The Delaware River and Bay Authority on April 17, 2012 endorsed the Byway by supporting a resolution to include the Townbank/Ferry Spur between Seashore Road and to Beach Drive near the Cape May Ferry Terminal. New Jersey’s byway is sponsored by the South Jersey Bayshore Coalition and Association of New Jersey Environmental Commissions.



Historic Chart of the Delaware Bay and River illustrating the influence of this important resource on maritime activities and proximity to Delaware, New Jersey and Pennsylvania

2.2 THE BYWAY STORY AND ITS QUALITIES

“Welcome to Delaware’s quieter and wilder side” is about making a conscious decision of getting off the crowded bustling highway of modern America and letting your senses take in the majesty and power of Mother Nature in the wildlife areas and coastal communities of Delaware’s Bayshore. The Byway is only a few miles away from I-95, one of the nation’s busiest highways, carrying 35% of the nation’s vehicular trips and 565 million long distance trips each year as it travels 1917 miles between Maine and Florida². While the highway is only 23 miles long in Delaware, some 175,000 vehicles per day travel along I-95 in the vicinity of Delaware Route 1, the major regional route access to the Bayshore³. The Byway runs parallel to Delaware State Route 1, which connects Delaware’s two largest cities, Wilmington and Dover, to the world-renowned Atlantic Ocean resort areas of Delaware’s Coastal Sussex County. Although the majority of people speed along these major roadways, some residents and travelers choose to leave the highway and take in the Route 9 experience – **“The road less traveled”**.

The area once was the cradle of colonial Delaware; settlements in New Castle, Port Penn, Little Creek and St. Jones Neck date back to the 1600s. The abundance of natural resources from the bay and wetlands, the rich coastal farmlands and a network of waterways as the transportation system supported both Native Americans and early settlers. Through the 1800s, life was truly about living in harmony with the cycles of Mother Nature. The villages of Woodland Beach, Pickering Beach and Kitts Hummock front the Bay. The villages of Leipsic and Little Creek are directly tied to the Bay. All have accessibility to the wildlife resources that could be hunted, fished, or trapped. With the advent of more modern transportation systems, first the railroads and then the automobile, the importance of the water network and the natural resources declined, and industrialization for the most part occurred inland away from the marsh and wetlands. The Bayshore area was dominated by large farms that passed from generation to generation and by hunting, and commercial and recreational fishing. While the major industrialization occurred north of the Route 9 Bayshore region in Wilmington and Philadelphia, pollution from these late 19th and 20th century industries spread down the Delaware River and Bay killing off aquatic life of the Bayshore and sending the prosperous fishing industry into rapid decline. As population centers migrated to industrial areas, the Bayshore communities went to sleep.

The Byway, as we know it today, exists because of the conservation and preservation efforts of concerned citizens and government leaders. Catalyzed by the federal government initiatives of creating National Wildlife Refuges in the early 20th century, state government leaders, local grass-roots activists and environmentalists gave birth to the Delaware conservation movement, which contributed to the rural and shoreline character of the Route 9 Byway region that we know today. The Bombay Hook National Wildlife Refuge was created in 1934 by the Migratory Bird Conservation Act. Concerned citizens and business owners have worked diligently to preserve the historic small towns of New Castle, Delaware City and Odessa. Other Byway communities of Port Penn, Little Creek, Leipsic as well as

² I-95 Corridor Coalition, <http://www.i95coalition.org/i95/Home/I95CorridorFacts/tabid/173/Default.aspx>

³ DeIDOT, 2012 Traffic count data.

Woodland Beach, Pickering Beach and Kitts Hummock through generations continue maritime and agricultural pursuits. Today, these small community enclaves offer the pleasures of wildlife viewing, beachfront activities and respite from bustling daily lives.

An environmental drama unfolded in the 1960's and 1970's when then Governor Russell Peterson and others quietly moved to preserve the environmental quality and beauty of Delaware's unique coastline. Envisioned by industrialists and the federal government as the primary supertanker port and industrial center in the East⁴, the Route 9 coastal landscape could have been dominated by oil refineries, power plants and industries lining its shores. It was the proposed construction of a second oil refinery in 1961 that drew opposition and began the battle to protect the environment for future generations of Delawareans. Ted Harvey and other environmentalists organized Delawareans for Orderly Development in opposition to another oil refinery. This led to the creation of other environmental organizations dedicated to the protection of wildlife and the preservation of natural resources.

Responsibility for protecting Delaware's natural resources rests with the State according to the Delaware Constitution, which was adopted in 1897. The establishment of a State Planning Office and DNREC along with the Coastal Zone Act adopted in 1971 and the Wetland Act adopted in 1973 led the way toward addressing, managing, and regulating environmental issues and resources throughout the State. In 1978, the Delaware Nature Society listed 101 areas in "*Delaware's Outstanding Natural Areas and Their Preservation*"⁵, including portions within the Delaware's Bayshore Byway corridor. Delaware Wild Lands, Inc., founded in 1961 by the late Edmund H. (Ted) Harvey, is a private, non-profit organization dedicated to the conservation and preservation of natural areas through the acquisition and management of strategic parcels of land many of which are within the Bayshore region. Other organizations are actively involved in protecting the resources along the Byway and within the Bayshore. The Nature Conservancy and Delmarva Ornithological Society helped to protect Yardley Dale at Thousand Acre Marsh, and The Conservation Fund helped to protect Mispillion Harbor, just north of Slaughter Beach.

Without these initiatives, there would be no "*road less traveled*" nor would the Byway or the Bayshore Initiative be a reality. Wildlife, marshland, and a Delaware River and Bay with diverse aquatic life would be gone forever, and so would a burgeoning local tourism industry. Today, the landscape along Delaware's Bayshore Byway is evidence of the changes in public policy that actively protected this local and globally significant environment and mitigated the transformation of this natural landscape into another industrial setting. This legacy of conservation and preservation provides residents and travelers an opportunity to actively observe Mother Nature up close, enjoy the abundant marshes and water resources in a wide variety of recreational pursuits, and learn about the rich history of the early settlers of this country living by the cycles of nature and from the riches of the land and water.

⁴ Man and Nature in Delaware: An Environmental History of Delaware, 2008, William H. Williams

⁵ Fleming, Lorraine M., 1978

The Byway story is also a collection of place-based stories organized into “Discovery Zones” that focus on:

- Experiences from nature derived from the ecology and landscape of the Delaware River and Delaware Bay (Natural Qualities)
- Living history for insights into the relationship of the people to the Delaware River and Bay and its coastal landscape over 400 years (Historic and Cultural Qualities); and
- Heroic efforts to protect and conserve the coastal environment for future generations. (Scenic Qualities)

Role of the Estuary and Natural Habitat

The Delaware Estuary in the Bayshore region encompasses the Delaware River and its tributaries, Delaware Bay, and the tidal marshes and wetlands. It is an economic engine for the region providing some 500,000 direct and indirect jobs generating more the \$10 billion dollars in annual wages. Nearly 2% of the United States population relies on the Delaware Estuary for their drinking water, with 750 million gallons of drinking water supplied each day directly from the Delaware Estuary and its nearby tributary watersheds. In addition to wages, activities associated with the Delaware Estuary including recreation, water quality and supply, hunting, fishing, forest, agriculture, and parks generate an estimated \$10 billion annually in economic value for the region.⁶ As long as this region was inhabited, humans have relied upon the Delaware Bayshore natural resources for sustenance. Whether for food, commerce or recreation, the estuary has provided in abundance. From the early Dutch settlements in the 1600's, to mariners navigating its waters, to the 19th century fishing towns and towns that once served as resorts and escapes for residents of Dover, Wilmington and other communities, the ecology of the larger Delaware Estuary is a unique natural resource. Even more importantly today, conservation efforts continue to assure that the natural habitat of the Bayshore is retained for generations. Nature, eco and heritage-based tourism is a

Discovery Zone Concept

Discovery Zone place-based stories reflect local heritage, cultures, and landscapes, and the opportunity for eco-tourism that sustains or enhances the geographical character of a place—its environment, culture, aesthetics, heritage and the wellbeing of residents.

Estuaries are transitional areas where salt water from the sea mixes with fresh water making them one of the most productive habitats serving as spawning nurseries and feeding grounds for fish, birds and other wildlife.

⁶ Kauffman et al., 2011. Economic Value of the Delaware Estuary Watershed. University of Delaware – Water Resources Agency Institute for Public Administration School of Public Policy and Administration).

focus and are important to the River and Bay communities where economic benefit can be drawn from sustaining the resources and character of the Delaware Estuary.



Still remaining is this range tower.



Thousands of horseshoe crabs were abundant near Bowers Beach (Hammond, Roydon. 1380-006_#723_King crabs near Bowers_1928. Glass plate photograph. Center for Historic Architecture and Design, University of Delaware.)

protect the natural environment of the coastal areas and safeguard their use primarily for recreation and tourism.

This ecologically significant Delaware Coastal Zone was also designated as a globally “Important Bird Area” by the National Audubon Society because of its critical role in the life cycle of multiple imperiled species, including Red Knot, Black Rail, Saltmarsh Sparrow and Piping Plover. The entire Byway lies within the Atlantic Flyway for migratory birds. The spring season brings hundreds of thousands of shorebirds to the Bayshore’s sandy beaches and coastal marshes to rest and refuel for the remainder of their

The lower portion of the Delaware Estuary⁷ is the area directly associated with the Route 9 Byway corridor and contributes to what characterizes much of the byway landscape. The marsh lands are wide along the coast and with the extensive mixing of salt and fresh water, rich marine life is found along the coast and the Byway. In past years, seafaring commerce was guided safely to and from ports and in storms from the lighthouses and range towers. Because of the estuary’s importance to commerce, wartime defenses were established to protect the country from attack. The role of the estuary provides a critical understanding of the environment and its role in the Bayshore history.

Recognizing its importance to Delaware, the Delaware Coastal Zone Act was designed to protect Delaware’s coastal area from destructive impacts of heavy industrialization and offshore bulk product transfer facilities. It was also intended to

Pea Patch Island

“Pea Patch Island is home to the largest wading bird colony on the Atlantic Coast of the United States. The Delaware River, wetlands, and uplands that radiate 15 kilometers out from the center of the island support the foraging habits of these birds. The birds nest on the Island from March to September and depend on the Region’s natural resources to sustain themselves and their offspring during this time.”

*The Pea Patch Island Heronry
Region Special Area Management
Plan*

⁷ See Delaware Estuary Map, Figure 2-1

migratory flight north. The “fall” migratory season brings shorebirds back again as early as July with peak numbers and diversity occurring into September. Waterfowl are also plentiful during fall migration from September to November. Many kinds of waterfowl winter along the Bayshore in great numbers – especially snow geese – through February and March when northward spring migration begins again for waterfowl. Innovative uses of weather radar recently demonstrated the importance of Bayshore forest



Today’s agricultural landscape along Delaware’s Bayshore Byway

and shrub habitats as resting and feeding areas for songbirds during spring and fall migration.⁸

These and other natural qualities are the foundation for and at the heart of Delaware’s Bayshore Byway and the Delaware Bayshore Initiative. This Byway corridor is distinctive because of its natural, scenic and historic characteristics that both define the Bayshore and the people who depend on it for their livelihood and pleasure. Fisheries were the lifeline for the maritime industry in Port Penn, Little Creek, Leipsic and Woodland Beach. Notably also is Delaware’s spring spawning of the horseshoe crab along the shoreline of the Bayshore as a breeding epicenter. Oysters, once one

of the biggest fisheries in the Delaware Bay until the mid-20th century, are today being restored through shell-planting management efforts.

Seasonal Cycles

The ebb and flow of the water is synonymous with the calendar seasonal cycles that guided the lives of the people who lived along its shores and made a living off the land and the water. From this estuary, sprang fishing and oystering towns, ports, industrial centers and wildlife refuges. Throughout the late 1800s and early 1900s, oysters were the livelihood of Baymen.⁹ Today, the state wildlife areas, state parks, natural estuarine research reserves and reserves, national wildlife refuge, private conservation lands, the working agricultural landscape and farmland preserves reflect how important the landscape is to the people who settled here. They continue to value the land for its



Maritime activities on the Delaware Bay and River dominated Delaware’s shoreline providing a livelihood for many. (Hammond, Roydon. 1380-006_#1926_Boats. Glass plate photograph. Center for Historic Architecture and Design, University of Delaware.)

⁸ La Puma, D., D. Mizrahi, J. Buler, and V. Elia. 2012. Determining high-use bird stopover areas in the Mid Atlantic Coastal Plain using National Weather Service Doppler radar. Report to the Delaware Division of Fish and Wildlife, DNREC. 44pp.

⁹ (University of Delaware Sea Grant College Program, 1988)

natural resources and location on the Delaware River and Delaware Bay and derive their livelihood from it.

Genealogies in New Castle, DE and Salem, NJ show how family relations linked these two coastal communities. Floating villages could also be found up and down the River. There are stories of how these floating villages were so dense, it was difficult to travel up and down the river and some old timers joke that you could walk across the river by hopping from boat to boat.

A Shifting Landscape

Change is part of the story of this unique landscape, past, present and future. Examining the Byway landscape offers a view into human activities that have molded the communities and environmental characteristics of the byway corridor.

The engineering of dikes and canals in the 16th century protected the City of New Castle and other areas while the control of water established land for agriculture. The Chesapeake and Delaware Canal (C&D Canal) is a 14-mile long, 450-foot wide and 40-foot deep ship canal that connects the waters of the Delaware River with those of the Chesapeake Bay and the Port of Baltimore. It is owned and operated by the U.S. Army Corps of Engineers. The construction of the C& D Canal began in 1804, was halted for two years and was open for business in 1829. The C&D Canal today is the only major commercial canal built in the early 1800s that is still in use.¹⁰ The clearing of forested lands for agriculture provided food and a living for many. In the past, corn, squash, beans and tobacco were grown. Today's crops include wheat, corn and other grains, potatoes, and soybeans.

The ever-evolving maritime activities capitalized on the seawater and resources of the estuary environment. Fishing for shad, perch, weakfish, striped bass, oysters, blue crabs and other finfish and shellfish are recreationally and commercially important today. Although some fisheries have declined to the point where harvest is no longer permitted (e.g., sturgeon), but ongoing conservation efforts continue to improve the health of the estuary environment in hopes of replenishing all fisheries.

The long narrow shape of the Delaware Bay explains why this Byway corridor has the most complete network of Coastal Defense resources in the country beginning with the War of 1812 and the Civil War, and through World War I and II. Each new generation of military defense moved farther downstream:

- American Revolution Defenses – Fort Mifflin, PA (1777)
- Civil War Defenses - Fort Delaware, DE (1859) and Fort Mott, NJ (1896), Fort DuPont (1898) Civil War through World War II
- World War I – Fort Saulsbury (1918) located in Delaware
- World War II – Fort Miles (1941) located in Delaware

¹⁰ Scott M. Kozel, Pennways, Roads to the Future, http://www.pennways.com/CD_Canal.html

The Delaware Estuary watershed and its natural resources face new challenges from global climate change and more immediate flooding and erosion from sea-level rise. Sea-level rise threatens a number of the natural wildlife areas, farms and towns, and will change management efforts to protect vital ecosystems, wildlife habitats, and popular hunting, fishing and birding areas.

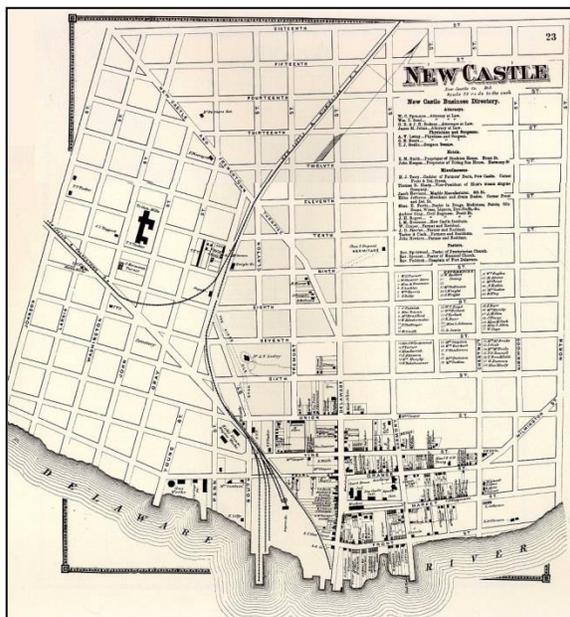
2.3 CORRIDOR CHARACTERISTICS

Since the 2007 nomination, the Byway story and its significance have grown. The many conserved natural areas and historic sites are playing a much larger role, especially since the launch of the State Bayshore Initiative and the national America’s Great Outdoors Initiative in 2012. Originally the Byway concept primarily focused on the road and the attractions immediately adjacent to the road. The enhanced concept now treats the byway as a corridor with the road as the spine and key attractions as Discovery Zones. In alignment with this change, the focus on water throughout the region provides a rich opportunity for traveler experiences. Additionally, the understanding and awareness of the threats of global climate change and specifically sea-level rise and its impact on Delaware and the Delaware Bayshore have advanced tremendously. Flooding and beach erosion are major issues to both the residents and State government in many areas of the Byway region. Incorporating these issues into the management process of the Byway will be a critical component of the future success of the project.

The Byway corridor is characterized by the:

- Integrated system of state and local parks, state wildlife areas, natural estuarine research reserves, national refuge, a network of rivers and streams that meander through them, and bucolic farmland;
- Historic coastal communities and historic attractions; and
- Three inland towns – Middletown, Smyrna and Dover that provide traveler services and other attractions.

Natural areas are significant resources along the Byway offering the traveler exceptional recreational and educational opportunities while providing for conservation of the Delaware Estuary’s natural resources and its wildlife habitats.



Historic City of New Castle Map circa 1868

Similarly, historic sites enrich the visitor’s experience can be found along the Byway including, among others:

- First State National Monument, which includes the New Castle National Landmark Historic District and National Historic Landmark anchored by the Green, the Sherriff's House and the Court House;
- Delaware City National Register Historic District that includes over 680 acres and 204 buildings;
- Fort DuPont National Historic District;
- Fort Delaware State Park on Pea Patch Island;
- Port Penn Historic District and the Interpretative Center operated by DNREC;
- Ashton Historic National Register District and Aston House at Yardley Dale Tract of Augustine Wildlife Area;
- Liston Front Range Lighthouse;
- Odessa Historic District (a National Register of Historic District) and the Historic Houses of Odessa;
- Vogel House in Cedar Swamp Wildlife Area;
- Historic farm houses and agricultural districts including the Huguenot House and Little Creek



Panorama view at Reedy Point and the byway landscape including the C&D Canal and the Delaware River.

Hundred Rural Historic District; and

- John Dickinson Plantation operated by the Division of Historical and Cultural Affairs of the Delaware Department of State.

Taking a journey along the byway today is an experience in serenity and is often chosen as the “road less traveled” because of its rural character, coastal landscape and scenic beauty. Whether a traveler is in a car or boat, on a bicycle or on foot, the beauty of the natural landscape of marshes, creeks, and agricultural fields dominant the view. The only exception is the vastness of an industrial landscape between New Castle and Delaware City, and a few intermittent views of residential subdivisions. The best water views are from the many bridges that cross over the creeks, rivers and marshes with the most spectacular being the panorama view from the Reedy Point Bridge over the C&D Canal just south of Delaware City.

The northern end of the byway is characterized by the beauty of historic towns of the City of New Castle and Delaware City, both of which are best experienced on foot or by cycling. Boat access offers an alternative way to experience these Bayshore towns. Eighteenth century architecture offers an entrée to the people who settled here and the events that transformed them. On March 25, 2013; President Obama established the First State National Monument including sites that encompass nationally significant sites, which contributed to the settlement of the Delaware region by the Swedes, Finns, Dutch and English, and the role that Delaware played in the establishment of the Nation.¹¹ This designation recognizes the City of New Castle’s downtown historic district listed on the National Register of Historic Places and a National Historic Landmark takes you back in time in a scenic setting. From Battery Park in New Castle, panorama views of the Delaware Memorial Bridge, Delaware River and New Jersey coastline provide travelers a place to enjoy the magic of the waterfront.

Delaware City, another scenic riverfront community listed on the National Register of Historic Places, has significant views of the Chesapeake and Delaware Canal and Delaware River. A stroll down through this well-preserved 19th century bay town offers the traveler a glimpse back into an earlier era in a scenic setting. It is the gateway to Fort Delaware State Park where one can board the Delaware City-Salem Ferry to Pea Patch Island and its rookery, one of the largest nesting colonies of herons and egrets on the



View of the Chesapeake and Delaware Canal in historic Delaware City

¹¹ Office of the Press Secretary; The White House, A Proclamation,

east coast. The Riverfront Promenade also provides scenic views of the Delaware River, the island and the numerous birds flying between the nesting area on the island and the feeding areas on the mainland.

As one travels south along the Byway, the working agricultural landscape is a significant feature of the corridor's scenic beauty and pastoral character. Farmland is dispersed among the expansive natural landscape of waterways and marshes in the northern segments of the Byway whereas more traditional views of continuous farm fields dominate the southern part of the Byway. Many of these farms exist today because of the continued stewardship of farmers who have tilled and worked the lands for generations and state conservation practices through the Delaware Department of Agriculture preservation and planning programs that supports the Agricultural Lands Preservation Foundation.

In harmony with this agrarian landscape are the communities of Port Penn, Leipsic and Little Creek. Leipsic still retains maritime activities, while all reflect the livelihoods of farming families, watermen and an earlier connection to the marsh culture. The culture of the Delaware coastal marsh is unique and reflects how people used the natural environment to create a living, muskrat trapping being one the most prominent.

The bay front community of Woodland Beach, once a thriving resort town, is today a quiet enclave of residential development with bayfront access along with Pickering Beach, a significant horseshoe crab spawning area, and Kitts Hummock.



Muskrat trapping

Because the land is relatively flat, the most scenic views over a broader landscape are found on the numerous bridges along the byway corridor. A few existing observation towers provide opportunities to view the scenic Bayshore landscape at Taylor's Gut in the Woodland Beach Wildlife Area and at Bombay Hook NWR (Raymond Pool, Shearneck Pool and Bear Swamp Pool). There is also a popular observation tower at Little Creek Wildlife Area. The boardwalk between the St. Jones Reserve and Ted Harvey Wildlife Management Area offers spectacular views of the marsh landscape. Scenic views of the River and Bay are afforded within the City of New Castle, Delaware City, and Port Penn, as well as, from the many boat ramps, fishing piers and marinas along the Byway. Many of the Byway towns and hamlets offer spectacularly sweeping scenic views of the marsh and the Bay. Traveling on the Delaware-Salem Ferry from Delaware City provides for viewing the scenery of Delaware's Bayshore landscape. The Scenic Viewshed Maps, Figures 2-2A and 2-2B on pages illustrate the location and photographs showing representative images of the Byway scenic views.

In addition to the waterfront towns and beaches, along the entire byway, waterways reach out from the Byway to the Delaware River and Delaware Bay. The DNREC Division of Parks and Recreation developed the Coastal Heritage Greenway in 1992 that identified three waterways highlighting Delaware's coastal treasures:

- Red Lion Creek
- Dragon Run
- Silver Run

Several other important waterways that contribute to the natural and scenic qualities of this byway are:

- Augustine Creek
- Drawyer Creek
- Appoquinimink River
- Blackbird Creek
- Smyrna River
- Leipsic River
- Duck Creek
- Simons River
- Little River
- St. Jones River



Leipsic River

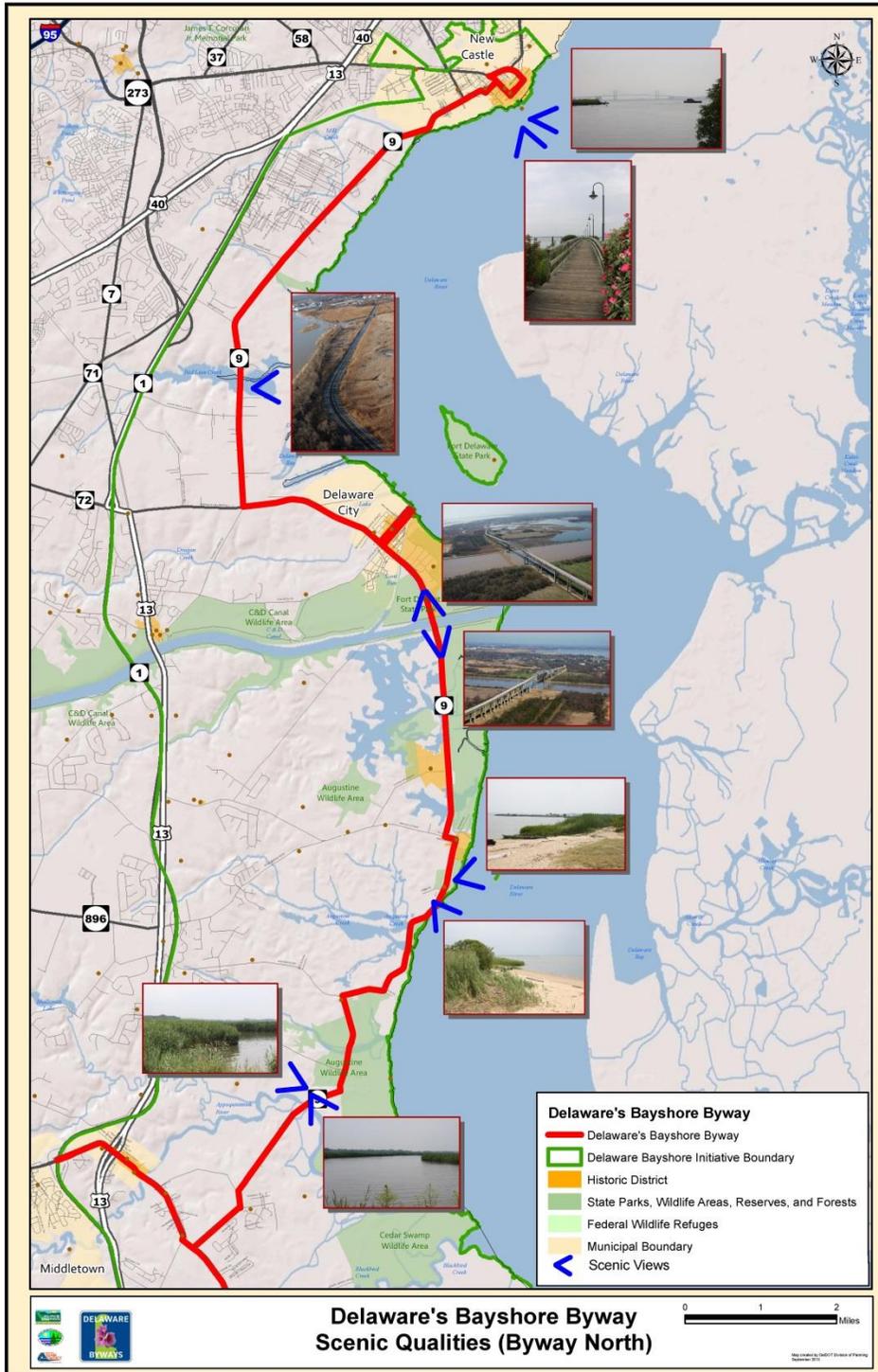


Figure 2-2A: Scenic Qualities Map, Northern Section

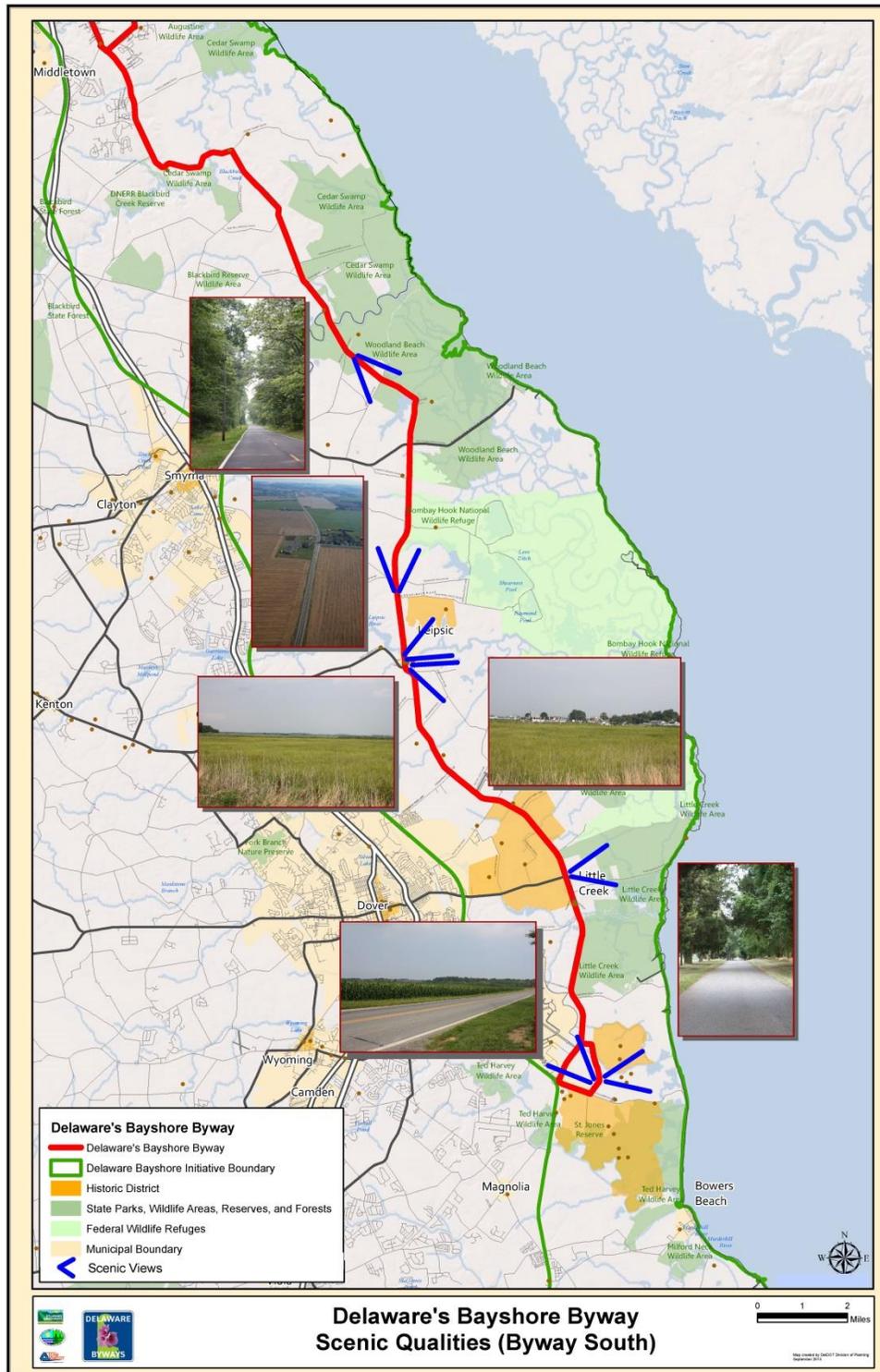


Figure 2-2B: Scenic Qualities Map, Southern Section

Delaware Estuary and Coastal Plain

The Delaware Estuary, one of Delaware's three major watershed basins, claims the largest portion of the First State. The Delaware Estuary watershed actually extends far into New Jersey and Pennsylvania as well, stretching 134 miles from the Trenton Falls to the mouth of the Delaware Bay between Cape May, NJ and Cape Henlopen State Park near Lewes, DE. Today, the estuary is classified into distinct regions – the tidal river, the brackish upper estuary, the lower estuary and the mouth of Delaware Bay (University of Delaware Sea Grant College Program, 1988).

Approximately eight million people live within the Delaware Estuary's watershed; many depend on it for food and drinking water. Numerous species of plants and animals, such as oysters, blue crabs, horseshoe crabs, diamondback terrapins, loggerhead sea turtles, a variety of waterfowl and shorebirds thrive on the Estuary's highly productive ecosystem. The Delaware Estuary is also home to the world's largest horseshoe crab population. Red knot and 15 other species of migratory shorebirds, including Ruddy turnstone, Sanderling, Semipalmated sandpiper, Black-bellied plover and Short-billed dowitcher, are found here in significant numbers during spring migration. Other migratory birds of conservation concern, including American black duck and black rail, nest in the marshes of the estuary. One of the largest colonies of nesting herons and egrets on the East Coast is found in the Delaware Estuary on Pea Patch Island near Delaware City.

The shoreline of the Delaware Estuary is a continuum of key habitats – sandy shoreline, freshwater, brackish and saltwater tidal wetlands, upland fields and forests. The estuary is a vital ecosystem that is not only home to the largest population of spawning **horseshoe crabs** in the world, but also the second-largest concentration of migrating **shorebirds** anywhere in the Western Hemisphere. Meanwhile, its waters serve as important habitat for **finfish** and **shellfish** fisheries.¹²



Snow Geese in field along the byway



Horseshoe crabs on the shore of the Delaware Bay

¹² www.ecodelaware.com



This Byway is also an area where there are some of the oldest settlements in the state along with a diversity of great examples of 18th and 19th century architecture. Humans living within the Delaware Estuary date back 12,000 – 13,000 years. Two archaeological sites in Thousand Acre Marsh indicate Native American occupations during the late Archaic and Woodland periods. Before the arrival of the Europeans, the Lenape were people of the woods and water. The Dutch, Swedes and English began to settle in the area during the 17th century. The Delaware River and Bay and tributaries reaching inland served as a transportation route helping to develop the commercial agriculture and fishing industries, booming trading of goods, and tourism within the Byway corridor.



CHAPTER 3 INTRODUCING

DELAWARE'S BAYSHORE INITIATIVE AND THE BYWAY'S DISCOVERY ZONES



3.0 INTRODUCTION

Delaware's Bayshore Byway closely parallels the northern portion of the Delaware Bayshore for 52 miles, providing access to the Bayshore's natural areas, towns and communities, historic points, farms and water. Key traveler activities along the byway include:

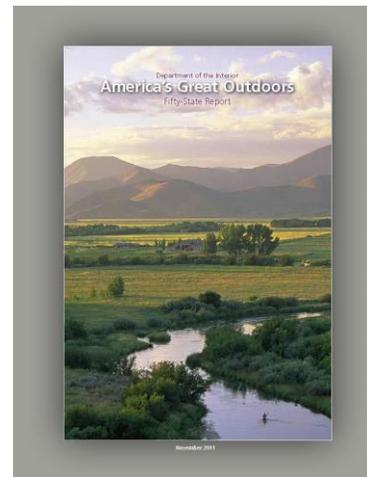
- exploring rich coastal natural areas – birding, observing horseshoe crabs, wildlife viewing and photography, significant coastal education options;
- hunting, fishing and crabbing, both from the shore as well as from boats;
- hiking, biking, paddling and boating;
- exploring historical sites and communities;
- enjoying local food; and,
- a peaceful drive back into time.

For residents and visitors alike, it is “the road less traveled”. For the eco-tourist, it is the connection to Delaware's wild side.

3.1 DELAWARE'S BAYSHORE INITIATIVE

This section describes Delaware's Bayshore Initiative, its current programs and projects and its future direction. The chapter further describes the current plans and planning efforts of the towns and communities as well as the individual natural areas along the Byway. Many of the planning efforts, particularly those of the natural areas, are bound together by the Bayshore Initiative. But it is also important to recognize that the cities and towns along the Byway are unique and cannot be lumped together. Each must be explored in its own way to be fully appreciated.

The Bayshore is widely recognized as an area of global ecological significance. Its expansive coastal marshes, sandy shoreline, forests, fields and agricultural lands provide habitat for more than 400 species of birds and other wildlife. The Nature Conservancy and the National Audubon Society recognize the region as a globally significant wildlife habitat. The Nature Conservancy has called the Delaware Bayshore “one of the Earth's most important stopovers for migratory birds.”



Delaware Bayshore: America's Great Outdoors

One of 100 of the nation's most promising efforts to reconnect American's with the natural world.

No specific AGO funding is earmarked in federal budget, but many existing grant programs are focusing on funding AGO projects.

Delaware is using the power of our “AGO” designation to compete for grant funds for Bayshore projects.

“Landscape Conservation” is the current and future way to get funding.

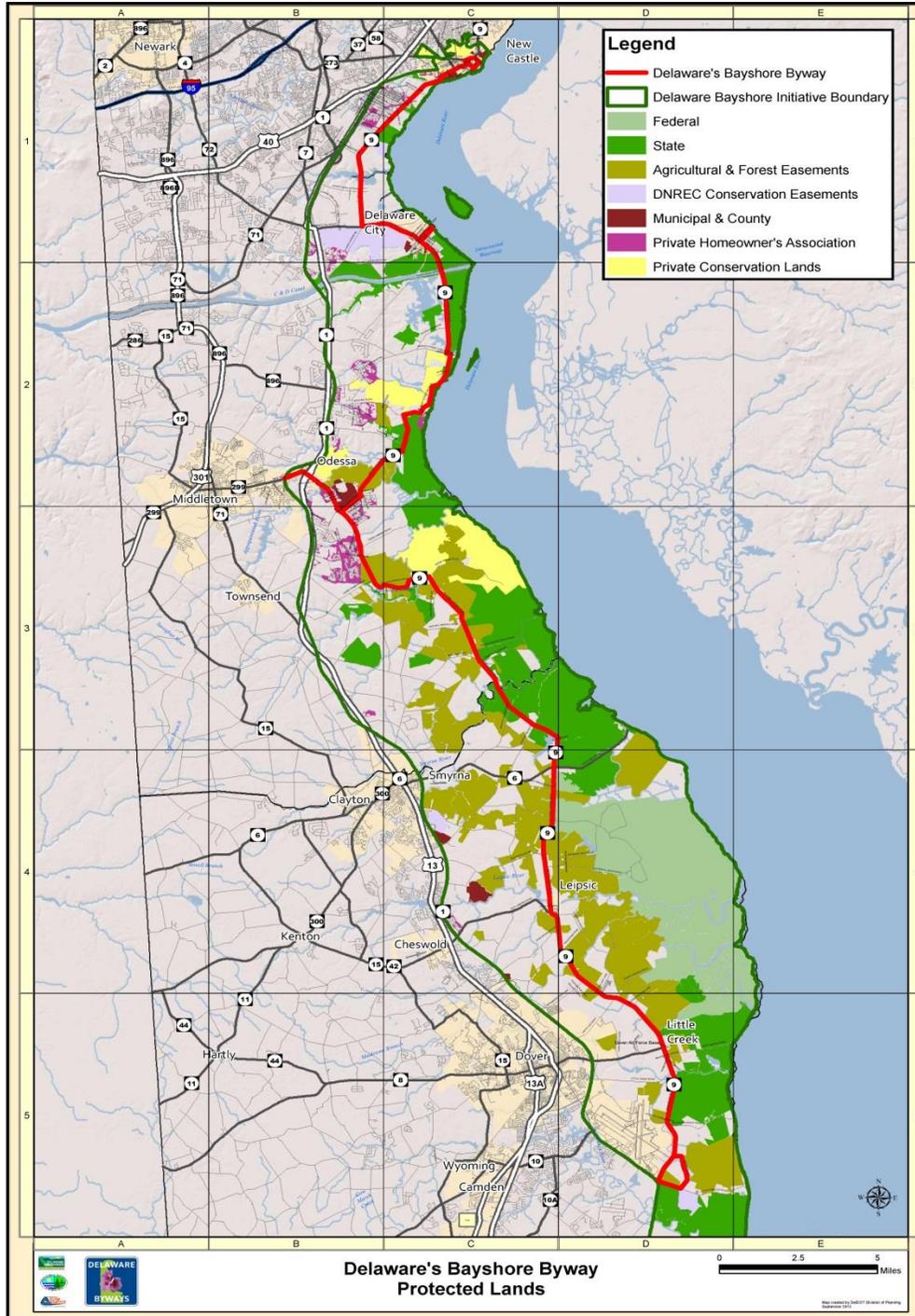


Figure 3-1: Protected Lands of the Delaware Bayshore

Delaware's Bayshore Byway

CHAPTER 3 – INTRODUCING DELAWARE'S BAYSHORE INITIATIVE AND THE BYWAY'S DISCOVERY ZONES



In 1992 the Delaware Bay Estuary was designated as a Wetland of International Significance by the Ramsar Convention on Wetlands because it provides critical resting and feeding areas for migratory shore and wading birds¹. Birders and biologists from around the world come to central Delaware's Bayshore to witness the annual spring spectacle of more than a half million shorebirds taking a rest stop to dine on the eggs of horseshoe crabs. In 1986, Delaware Bay joined the Western Hemisphere Shorebird Reserve Network as a Site of Hemispheric Importance due to the sheer number of shorebirds that use the bay as a migratory stopover². In addition to birding enthusiasts, the Bayshore offers quality recreational opportunities for hunters and anglers, boaters and kayakers, casual wildlife watchers, and families seeking outdoor opportunities to recreate and learn about nature.

The Delaware Bayshore Initiative continues the conservation commitment made over the past half century by citizens groups such as Delaware Wild Lands and government officials like Governor Russell W. Peterson in establishing Delaware's Coastal Zone Act. Due in large part to this legacy, most of the Bayshore is formally protected as state, federal and private conservation lands and remains undeveloped today. More than 115,000 acres are already protected as national wildlife refuges, state wildlife areas, state parks, national estuarine research reserves, private conservation lands, agricultural preserves, and cultural heritage sites throughout the Bayshore area.

Chapter 2 described how the efforts of private citizens and government officials saved the Delaware Bayshore from becoming industrialized. This 1971 effort resulted in the State's Coastal Zone Act which began the quest to protect the Bayshore. Since the passage of that Act, further legislation by both the federal government and Delaware State Government strengthened the protection. Recently, the northern boundary of the defined Bayshore region was extended to include the City of New Castle. This added area includes the marshes south of the City of New Castle surrounding Army Creek as well as the shoreline of the City. The shoreline includes Battery Park and the marshes and wetlands protected by historic levees first built in the 1700s to protect the city.

The extension also includes the industrial area north of Delaware City, anchored by the Delaware City Refinery. Including the Delaware City refinery in the Bayshore permits the Byway traveler to understand how important a resource the Bayshore is and why it is important to be protected. But it also enables the Byway traveler to understand the practices used by industry and consider whether they are compatible with the preservation and conservation efforts of the past and the future.

¹ For information regarding the Ramsar Convention and its findings regarding the Delaware Bay Estuary, see http://www.ramsar.org/cda/en/ramsar-documents-list-anno-list-usa/main/ramsar/1-31-218%5E15774_4000_0. The Convention on Wetlands (Ramsar, Iran, 1971) -- called the "Ramsar Convention" -- is an intergovernmental treaty that embodies the commitments of its member countries to maintain the ecological character of their Wetlands of International Importance and to plan for the "wise use", or sustainable use, of all of the wetlands in their territories.

² For information on the Western Hemisphere Shorebird Reserve Network, see <http://www.whsrn.org/western-hemisphere-shorebird-reserve-network>.





The Delaware City Refinery

Under the umbrella of Delaware's Bayshore Initiative, a framework has been established to preserve and protect the Bayshore. This framework is called the Grand Vision. Focused on the principles of habitat conservation, low impact recreation and strong communities, the initiative's vision is designed to bring both the public and the private sector to common goals. The Grand Vision follows:

Habitat Conservation: That we will leave for future generations a healthy, rural Bayshore landscape that supports a variety of habitats and an abundance of wild plants and animals – even in the face of climate change and sea level rise.

Low-impact Recreation: That we will have a network of publically accessible lands where people today and in the future can visit and have quality outdoor experiences through hunting, fishing, birding, kayaking, hiking or simply to enjoy a peaceful scenic view.

Strong Communities: That by doing so, we will have widespread support for conservation actions that will provide a better quality of life for residents and their communities and improve an economy boosted by the addition of jobs and income associated with eco-tourism.

The Bayshore faces five major challenges:

- Erosion and other damage caused by frequent and severe storms;
- Climate Change;
- Sea Level Rise
- Aging infrastructure; and
- Invasive species.

To guide where to focus activities, how to set priorities, and implement projects, four support teams have been formed within DNREC:

- Habitat Protection and Restoration
- Shoreline Protection and Flood Management
- Recreation
- Promotion and Financial Resources



In addition to working within the organization, the support teams will work with conservation partners and Bayshore towns, communities and residents to identify ideas, issues and concerns as well as insure that the activities of the Bayshore Initiative and the Byway are in alignment.

The work of the support teams has begun in parallel with the development of this Corridor Management Plan and it is anticipated these activities will continue and be supplemented in parallel with the implementation and updating of the Corridor Management Plan.

3.2 CURRENT PROJECTS OF THE BAYSHORE INITIATIVE

DNREC has been advancing projects in the agency's managed natural areas within the Byway's Discovery Zones that are in alignment with the Bayshore Initiative and the Byway. Summaries of these projects, some of which have been completed and others are nearing completion follow:

- **Thousand Acre Marsh Protection:** DNREC Division of Fish and Wildlife was recently awarded nearly \$1,000,000 from the National Coastal Wetlands Grant Program through the U.S. Department of Interior that will be used, along with matching funds from the state Open Space Program and private contributions from the Delmarva Ornithological Society and The Nature Conservancy, to acquire a 194-acre property known as the Yardley Dale tract located in the Thousand Acre Marsh. This acquisition brought a total of 388 acres of the marsh under protection, providing productive habitat important for waterfowl, shorebirds and fisheries. The new property will provide public access for wildlife-related recreation and viewing. Plans include building a platform for bird watching and scenic viewing along with interpretive signs, blinds for duck hunters and enhancing an existing walking path along the edge of the woodland and fields.
- **Fort DuPont State Park Habitat Restoration:** DNREC Division of Parks and Recreation is working in collaboration with Delmarva Ornithological Society and local Boy Scouts, to reforest four acres by replanting native trees and shrubs in an area that was cleared of invasive plants. Together their efforts will benefit migrating and nesting songbirds, and enhance wildlife-viewing opportunities at this State Park in New Castle County.
- **Pea Patch Island Habitat Restoration and Heronry Enhancements:** With the support of U.S. Fish and Wildlife Service (USFWS) State Wildlife Grants and Delaware Stewardship Funds, and with collaboration between the Divisions of Fish and Wildlife and Parks and Recreation, work is underway to restore more than 20 acres of forest on Pea Patch Island currently dominated by invasive tree-of-heaven and other invasive plants. Fort Delaware State Park on Pea Patch Island supports the largest mixed-species heronry in the Northeast U.S. Dedicated volunteers assist Delaware State Park staff with conducting colony surveys to monitor the health of nesting of herons and egrets.
- **Augustine and Cedar Swamp Wildlife Areas Habitat Restoration:** With the support of USFWS State Wildlife Grants, over four miles of exotic, invasive autumn olive hedgerows were removed from the Cedar Swamp and Augustine Wildlife Areas, and are currently being restored to native trees and shrubs.



DNREC manages several types of publicly accessible state-owned natural areas and recreation lands along the Bayshore, including State Wildlife Areas and Boat Ramps, State Parks and Delaware National Estuarine Research Reserves (DNERR). Each type of natural area has different primary uses and allowable activities.

State Wildlife Areas were established primarily for the purpose of wildlife and habitat conservation and to provide wildlife-associated recreation opportunities such as hunting, fishing, and wildlife viewing. Recreational activities and access to these areas may be limited at times due to safety concerns or because some activities may destroy habitat or cause chronic disturbance to wildlife. Education programs are also offered at some State Wildlife Areas such as the Aquatic Resources Education Center at Woodland Beach Wildlife Area. Many of the State Wildlife Areas are maintained in a more primitive state, with unpaved roads and parking areas (except at State Boat Ramps) and restrooms, if available, are typically portable facilities.

State Parks were established to provide a variety of recreational opportunities and educational and interpretive programs for the public. State Park lands conserve habitat and natural and cultural resources, but also provide a broad array of recreational opportunities. Most State Parks offer regular programs for the public about natural and cultural history. State Parks are developed to accommodate general educational and recreational uses and touring groups, with visitor support facilities and nature centers available at most parks. Hunting is used as a wildlife management tool in limited areas at State Parks, and these areas have restricted access during hunting season for safety reasons.

DNERR lands were established to preserve and manage natural resources through coastal stewardship, and to serve as a place for research, and for providing education and outreach programs that promote better understanding of Delaware's estuarine and coastal areas. The DNERR provides public programs, workshops and training on coastal topics, offers field classes for K-16 students and supports teachers through professional development programs in marine education at their facilities; access to these facilities may be limited while they are being used for scheduled programs. DNERR lands offer recreation activities that help promote coastal stewardship education, including hiking trails that meander through marsh, field and forest, and paddling access that allow visitors to explore tidal streams. Hunting is permitted in limited areas on DNERR lands, and these areas may have restricted access during hunting seasons for safety reasons.

Regardless of the accessibility of the natural areas to the general public, they are all contributing features to the Bayshore and to the Byway. Without these natural areas, both the Bayshore and Byway would be radically different. The public is encouraged to learn more about each of the natural areas and to get the latest information on any new features or seasonal closures by visiting each natural area's website provided above. For further information, please visit the ecoDelaware website. It contains useful information about visiting each of the natural areas of the Delaware Bayshore as well as many other natural and recreational areas throughout the state. It also provides a link to the website for each of the natural areas.

<http://ecodelaware.com/places.php>

- **Delaware Wild Lands Sharp Farm Habitat Restoration:** With the support of USFWS State Wildlife Grants, Delaware Wild Lands contributed matching funds to restore habitat on the 431-acre Sharp Farm north of Odessa, which is owned and managed by Delaware Wild Lands. More than 2,000 native trees and shrubs to expand Coastal Plain Upland Forest were planted on the property. In addition, seven invasive plant species in a core area of the farm are being controlled to enhance the quality of existing forest habitat for nesting songbirds and raptors.
- **Cedar Swamp Wildlife Area Habitat Protection:** Nearly 100 acres valued at \$439,000 was recently donated to DNREC's Division of Fish and Wildlife as an addition to Cedar Swamp Wildlife Area in New Castle County. The property features farmland, forest and wetland habitats, and offers spectacular views of Collins Beach Marsh. This new property will continue to serve as an important buffer for the adjacent marsh habitat in the watershed with the lowest percentage of impervious surface in the state.
- **Cedar Swamp Wildlife Area Wetland Restoration:** With the support of Delaware's Duck Stamp Program funds and in partnership with Ducks Unlimited and the Kent Conservation District, 30 acres of shallow-water wetlands were recently restored at Cedar Swamp Wildlife Area, with another 20 acres of wetland restoration planned for adjacent fields. Waterfowl, shorebirds and other species dependent on wetland habitats will benefit from these efforts.
- **Cedar Swamp Wildlife Area Early Successional Habitat Restoration:** With the support of USFWS Wildlife Restoration funds and recreational hunting license dollars, nearly 100 acres of habitat have been restored on Cedar Swamp Wildlife Area by converting dense monoculture stands of grasses into more open areas with diverse species and structure to improve habitat for meadow, grassland and shrub land birds and enhance wildlife viewing opportunities.
- **Blackbird Reserve Wildlife Area Habitat Protection:** Working with Delaware Department of Transportation, an additional 137 acres of mature hardwoods, field, shrub habitat, and farmland was permanently protected and added to the Blackbird Reserve Wildlife Area. This additional property will be open for hunting and other wildlife-dependent recreational opportunities.
- **Blackbird Reserve Wildlife Area Habitat Restoration:** Habitat restoration on Blackbird Reserve Wildlife Area included 80 acres of additional forest replanted with the support of funding from DeIDOT and State Wildlife Grants, and 3.5 acres of shallow-water wetlands was restored and



Great Egret

buffered by 16 acres of goose pasture and 24 acres of food plots as mitigation for the loss of migratory Canada geese attributed to the Athos I oil spill.

- **Little Creek Wildlife Area Early Successional Habitat Restoration:** With the support of USFWS Wildlife and Sport Fish Restoration, nine acres of an agricultural field were converted into a native wildflower meadow at Little Creek Wildlife Area, and over 100 acres of brush across four wildlife areas were converted to early successional field habitat. Forty-foot buffers were added to agricultural fields at Milford Neck Wildlife Area's Masten-Dickerson tract enhancing 35 acres of habitat.
- **Little Creek and Ted Harvey Conservation Area Wetland Restoration Projects:** With the support of USFWS Wildlife and Sport Fish Restoration funds including the State Wildlife Grant fund and matching funds generated by the sale of hunting licenses, 10 acres of wetland restoration were recently completed on the Little Creek Wildlife Area and the Ted Harvey Conservation Area, including placement of water control structures in ditches to restore wetlands that benefit waterfowl, and Cope's gray tree frog and spotted turtles, the latter both species of conservation concern in Delaware.
- **Ted Harvey Conservation Area Impoundment Water-level Management for Red Knots:** Efforts to target water-level management to improve roosting habitat for red knots during spring migration have paid off – more than 1,500 red knots were using the north and south impoundments at Ted Harvey Conservation Area during high tides. The impoundments offer safe, shallow-water resting areas where red knots can digest horseshoe crab eggs and increase fat reserves for the last leg of their flight to Arctic nesting grounds. Past radio-telemetry tracking data indicated red knots feeding on Delaware's Bayshore were wasting precious energy by flying 90-km round trips to roost on New Jersey's Atlantic Coast. Providing safe roosting habitat in Delaware up and down the Bayshore will help red knots save energy for the flight north and provide them with reserves to start nesting even if food is scarce during the still-frigid Arctic spring.
- **National Scenic Byways Program Byways Grant³:** DNREC was recently awarded a grant from the America's Byway Program. The purpose of the grant is to enhance wildlife viewing opportunities for Byway travelers at six sites in four state wildlife areas along Delaware's Route 9 Coastal Heritage Scenic Byway: Augustine Wildlife Area (Lang Marsh at Port Penn Tract and Thousand Acre Marsh at Yardley Dale Tract), Woodland Beach Wildlife Area, Little Creek Wildlife Area and Ted Harvey Conservation Area (north and south impoundments). Improvements will include:

³ National Scenic Byways Program Grant SB-2012-DE-57368: Route 9 Coastal Heritage Scenic Byway (DE): Scenic Overlooks for Wildlife Viewing, Interpretation and Amenities Enhancements.

1. Five observation towers/platforms;
2. Interpretative signs highlighting the primary natural qualities (e.g., coastal freshwater marshes, brackish-salt tidal marshes, coastal forests, wading birds, shorebirds, waterfowl, raptors, songbirds, mammals, recreational and commercially important fisheries) and secondary historic qualities (e.g., Ashton historic district, Port Penn founding history, John Dickinson Plantation, and hunting, fishing and trapping traditions);
3. Five information kiosks highlighting the sites' Byway connections and location relative to other sites and attractions along the Byway;
4. Enhance a walking trail through the Yardley Dale tract with interpretive stops explaining the challenges of protecting the natural qualities of the Byway's Bayshore habitats (e.g., Phragmites management, upland forest invasive species control);
5. Production of map and natural and historic intrinsic-quality information resources online, including mobile website enhancements, and in printed format to assist with Byway navigation and self-guided touring to safe scenic overlook access points;
6. Addition of three restrooms with one each at Yardley Dale Tract, Woodland Beach Wildlife Area and Ted Harvey Conservation Area; and
7. Directional signs directing Byway travelers to scenic overlooks and amenities; and,
8. Crushed-stone parking lot at Yardley Dale.

Management strategies and recommendations were developed by the four Bayshore Support teams for the natural areas managed by DNREC. The recommendations and strategies related to the Byway follow:

Habitat Protection and Restoration Support Team

Maintaining and supporting the natural habitat of the Bayshore is central to the Bayshore Initiative. The Support Team as it begins its work must weigh the need to acquire additional lands with the need to manage and restore existing conservation lands. Decisions regarding land acquisitions should also include how the land can restore and enhance the natural habitat. Strengthening the resiliency of the coastline in a sustainable manner against storms is needed. Educating the public about the Bayshore's wildlife is important because it helps build understanding and support for conservation efforts. Enhancing access to Bayshore conservation areas is an important part of educating the public about the value of habitat conservation. Identifying partners and setting priorities is the first action item for this team.

Shoreline Protection and Flood Management Support Team

The support team identified maintaining a healthy shoreline as its first priority, defining “healthy” as environmentally and economically sustainable. A shoreline protection and flood management analysis is needed to identify areas for adaptive restoration and management. This analysis will be an extension of the Sea-Level Rise Vulnerability Analysis and will help identify the most urgent actions needed on the ground to protect habitat functions and values.

Recreation Support Team

The Recreation Support Team recognizes that tourist services represent an important priority enabling visitors to enjoy what the Bayshore has to offer. A recent online survey by DNREC of activities of Bayshore visitors shows that wildlife viewing, walking and hiking are the most popular activities. There is a second level of activities that include birding, photography, fishing and canoeing. Taken together, these six activities were selected by 57% of the respondents of the 14 activity choices surveyed. While the survey will continue, it is anticipated that ‘hot spots’ of activities will emerge and become focus areas to improve access.

Promotion and Financial Resources Support Team

The DNREC online survey identified the frequency of visitation peaks twice: for short visits, one to five days per year, and a second time at 25 or more days per year.

The Promotion and Financial Resources Support Team recognizes that a marketing plan is needed as an important first step. However, while the marketing plan is being developed, existing

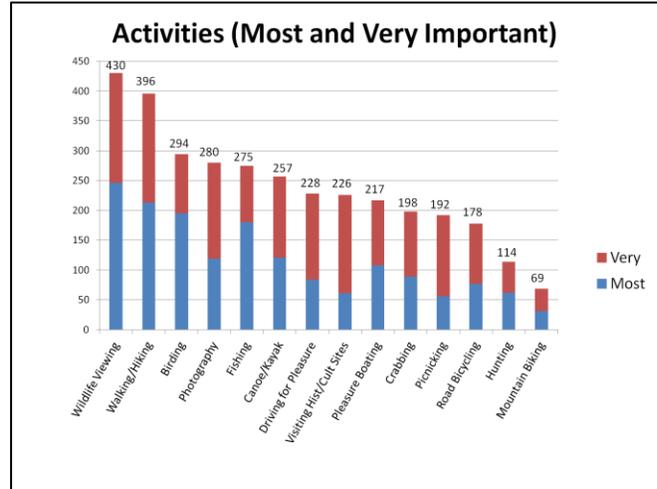


Figure 3-2: Importance of Activities among Visitors to the Bayshore

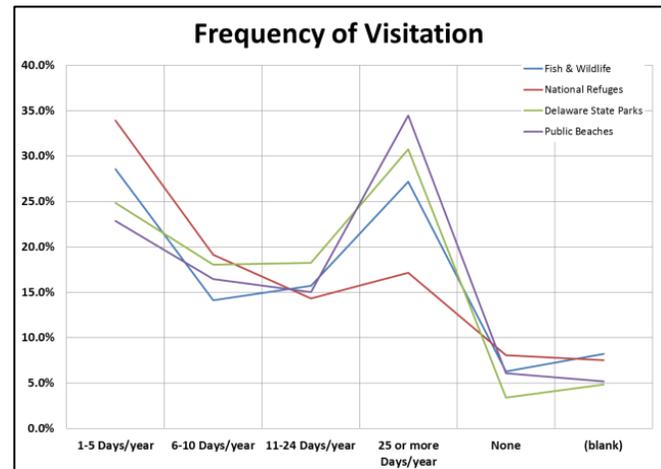


Figure 3-3: Frequency of Visitation to the Bayshore

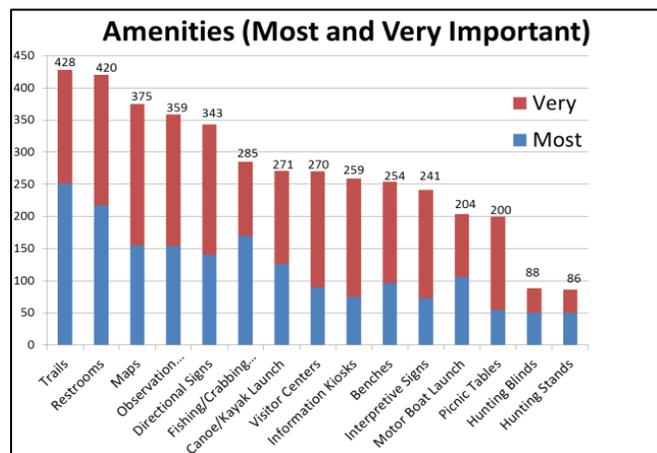


Figure 3-4: How Visitors Value Amenities at Bayshore Venues

sources of information and existing facilities that provide access should be improved.

Again, the online survey reveals that trails, restrooms, observation towers and maps are the most important amenities cited by the respondents.

It is anticipated that the four Bayshore Support Teams will remain in place to guide habitat conservation investments as well as enhancements for recreational access and tourism in a manner that respects the ecological sensitivity of the Bayshore's habitats and the way of life for the communities and residents of the Bayshore.

3.3 DISCOVERY ZONES

Delaware's Bayshore Byway is the connection that brings the communities and natural areas of the Bayshore together. Yet each of the communities has different histories and visions of the future. Although the natural areas have many similarities, they are also very different when it comes to ecological and cultural features and activity levels that can be supported. It is because of these similarities and differences that the concept of Discovery Zones emerged.

Discovery Zones are destinations that embody activity areas where travelers can learn about the byway, engage in outdoor recreational activities and other byway pursuits and events, and are directed toward visitor amenities. Each Discovery Zone has existing or untapped assets that tell the byway story and engage byway travelers. This chapter reflects the valuable input from each of the Discovery Zone Leaders and others during the CMP process.

The Discovery Zones of Delaware's Bayshore Byway, shown in Figure 3-5 are, from north to south:

- New Castle
- Delaware City
- Port Penn/Augustine
- Odessa
- Cedar Swamp/ Blackbird Creek
- Woodland Beach
- Bombay Hook
- Leipsic
- Little Creek
- St. Jones Neck

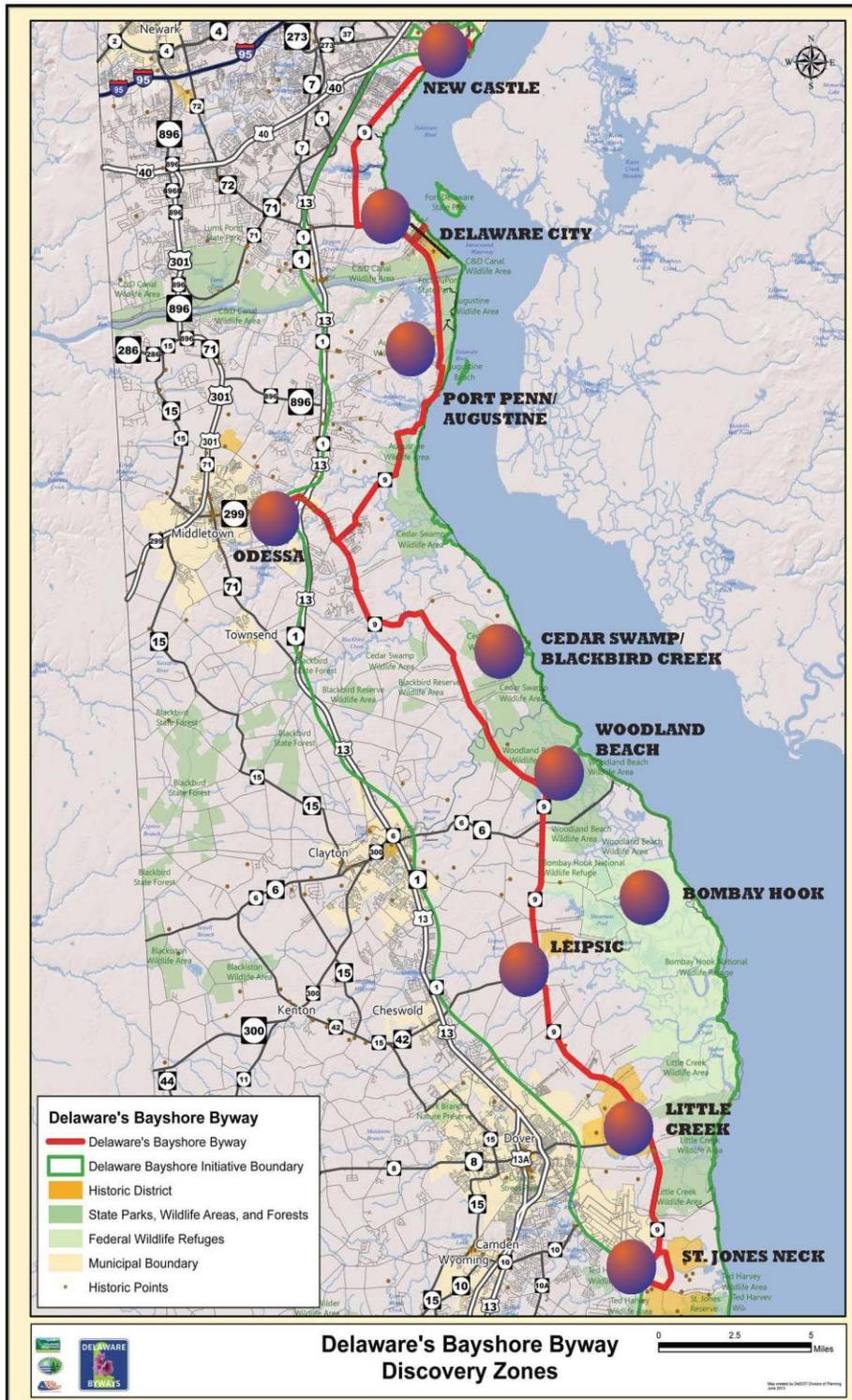


Figure 3-5: Map of Delaware's Bayshore Byway's Discovery Zones

Delaware's Bayshore Byway

CHAPTER 3 – INTRODUCING DELAWARE'S BAYSHORE INITIATIVE AND THE BYWAY'S DISCOVERY ZONES



Each of the ten Discovery Zones has different strengths, is pursuing a unique vision, and has different levels of traveler attractions and services. Many of the visitor services for the Discovery Zones south of Delaware City are currently located along US Route 13 and in the cities of Middletown, Smyrna and Dover.

3.4 NEW CASTLE DISCOVERY ZONE

The historic City of New Castle centers this Discovery Zone at the byway's northern gateway. Located at the junction of State Routes 141, 273 and 9 and two miles south of I-295 and the Delaware Memorial Bridge, it offers a glimpse into early Delaware history. The historic district in the center of the city is easily walkable, and its colonial history is very accessible. Whether you enter the city by car, bicycle, foot or boat, you will find a coastal seaport where colonial history can unfold, learn about the Underground Railroad and enjoy the panorama views along the City's waterfront. Walking tours provide a way to explore the architecture and stories of this Discovery Zone.

With its strategic location on the Delaware River, New Castle was originally settled by the Dutch West India Company in 1651 under the leadership of Peter Stuyvesant. The early governor of New Netherlands is said to have laid out the city's Green. The original settlement was named Fort Casimir, changed to Fort Trinity by the colony of New Sweden until the Dutch conquered the entire colony. New Castle's story as an English colony begins in 1682 when William Penn first landed in New Castle to take possession of his Pennsylvania colony. This port city on the Delaware River brought passengers, goods and business to the Chesapeake Bay and Baltimore. The New Castle Historic District listed on the National Register of Historic Places puts the over 300-year old history of the City on display and offers visitor amenities in a beautiful setting. The New Castle Court House Museum is one of the oldest courthouses in the U.S. and declared a National Historic Landmark. Along with the Sherriff's House, both buildings and the Commons are now a part of the First State National Monument, established in 2013.

Separation Day



Delaware, as a state, was 'born' June 15th 1776. Until that time, Delaware had been a part of Pennsylvania which was then called "The Assembly of the Lower Counties of Pennsylvania". Delaware was never recognized by the British Crown as a separate colony from Pennsylvania either. Those "Lower Counties" which would become the State of Delaware, had forced a separation from the "Upper Counties" (those situated around Philadelphia) in 1704 by threatening to petition Maryland to reclaim the land that the "Lower Counties" occupied. The land had originally been part of Maryland but William Penn's colonial charter assured lower counties that land based on the surveying of the Mason-Dixon Line was separate. Pennsylvania reluctantly agreed to allow the Lower Counties to govern themselves with their own Assembly.

Separation Day is still celebrated in the City of New Castle with a parade, crafts, dancing and fireworks.

Source: City of New Castle.



Current Initiatives Related to the Byway

City Government along with the Historic New Castle Alliance and the Trustees of the New Castle Common are progressing several initiatives designed to raise the City’s profile. There are six museums, a shoreline along the Delaware River and a number of guided tours available to visitors. Within the historic district, there are shops, restaurants and a bed and breakfast, all themed to complement their historic surroundings. Local birders picnic along the waterfront. Walkers and bicyclists exercise on the Riverwalk Trail. The Broad Dyke Marsh, recently acquired by the City of New Castle, and protected as a nature preserve provides habitat for a variety of species and is a wonderful place to observe wildlife. The City, in cooperation with DNREC, is working to restore the dike system to ensure habitat and flood protection. In addition, the City will be working to establish a trail to enhance wildlife viewing.

Efforts to attract local businesses that can provide additional amenities and services are already underway. The City’s Comprehensive Plan identifies the land area at the Byway’s northern gateway for redevelopment that is strategically located on two byways – Route 9 and Harriet Tubman Underground Railroad. Specific local initiatives include:

- *New Castle Waterfront*—Improve boat access so that visitors can arrive from the Delaware River to enjoy this Discovery Zone and take advantage of Battery Park. It also presents an attractive alternative to the City’s Historic District for those who like the peace and quiet of a waterfront. The potential to attract visitors can enhance options for tourism-related business and visitation. The City has received funds to move forward on preliminary engineering studies and permitting to restore waterfront access to New Castle. This effort will expand the amenities on the riverfront attracting boaters and visitors to this Discovery Zone. Programming in Battery Park further emphasizes the City’s efforts to capitalize on the Delaware River for residents and travelers.
- *Tall Ships* – A waterfront study is evaluating the potential for accommodating the tall ships in New Castle.



Shops and restaurants on Delaware Street opposite the Court House



New Castle Court House Museum, part of the First State National Monument

Delaware's Bayshore Byway

CHAPTER 3 – INTRODUCING DELAWARE'S BAYSHORE INITIATIVE AND THE BYWAY'S DISCOVERY ZONES



- *First State National Monument* – The New Castle Courthouse and the Sheriff's House as well as the New Castle Green are now part of the First State National Monument.
- *Buttonwood School and Museum* – The school was one of 80 schools built to teach African-American children in Delaware and was financed by Pierre S. DuPont.
- *Historic Penn Farm* – New Castle is highlighting sustainable agriculture and locally grown produce on this historic farm continuing William Penn's mission. Linking this farm with other sustainable agriculture farms will highlight the byway's past and future agricultural industry. Delaware Greenways is the current managing entity and operates a program to highlight local farm to table cuisine with William Penn High School as well as programs to educate young people about farm life and good eating habits.
- *Bellanca Airfield and Delaware Aviation Hall of Fame Museum* – This unique historic building is a great place to discover the history of the airfield and the aircraft manufacturing in New Castle. Giuseppe Mario Bellanca brought aircraft design from Italy and with Henry DuPont built the airfield, aircraft plan and hangar.
- *Bicycle destination* – With the New Castle Industrial Track Trail, co-designated as the East Coast Greenway, New Castle is being promoted as a bicycle destination.
- *Wayfinding/Bikeability and Walkability initiative* – The Historic New Castle Alliance, with the assistance of Delaware Greenways and Bike Delaware, is undertaking an initiative to encourage residents to live a more active lifestyle by encouraging bicycling and walking. The initiative also has begun plans for a wayfinding system for visitors.
- *Parking Study* – This study underway by the City of New Castle will survey and inventory existing parking spaces and locations to examine future needs and recommendations. This study begins to address the challenge of parking for both residents and businesses. The Parking Subcommittee of the Planning Commission holds regular meetings to move forward solutions. The City currently provides visitor bus parking, which is located on Chestnut Street with bus



The Historic Penn Farm, located on Route 273, Frenchtown Road, is owned by the Trustees of The New Castle Common. The Trustees are charged with continuing William Penn's mission of this 112-acre, urban centered 'tenant' farm "to live in Common for the accommodation of the Inhabitants of the Town of New Castle for their only use and behoof forever" (1701 document written by William Penn).

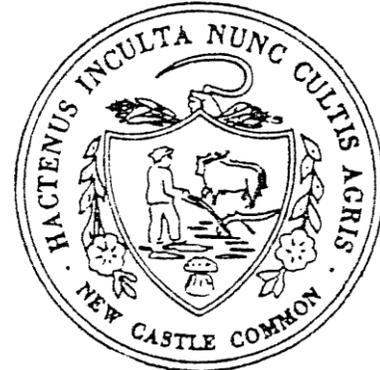
Delaware Greenways (managing entity and 22nd Tenant of Historic Penn Farm) along with 'Advisory Board of the Friends of Historic Penn Farm' provide guidance, support and encouragement to see to fruition both vision and mission of Historic Penn Farm.



loading and unloading of passengers on Second Street between Delaware and Harmony Streets. A third lot is located at the intersection of Route 9 and South Street.

Byway-Related Opportunities

- New Castle Gateway – An opportunity exists to welcome residents and visitors to the Byway, the Bayshore and the City of New Castle at a strategic location on two byways. The planning of the Route 9 Gateway has the potential to improve vehicular traffic, link important pedestrian and bicycle trails, add a critical pedestrian safety infrastructure, and guide land development in an attractive setting. A proposed transportation project that is included with the gateway project will be engaging the community in a conversation that will result in a context sensitive transportation improvement project designed to accommodate all modes of transportation in the gateway area.
- Undeveloped parcels – There are a number of undeveloped parcels of land near the historic center that create an opportunity to generate businesses that meet the demand for residents and travelers while providing important pedestrian and bicycle linkages, and improving the view from the Byway.
- Waterfront and the historic dike system – The first dike called the Broad Dyke was built in 1675. These dikes protect the City from flooding⁴.
- Active Community – The City of New Castle already has in place an infrastructure of civic-minded organizations such as the Historic New Castle Alliance (HNCA), a non-profit Commercial District Affiliate of Downtown Delaware, modeled after the National Trust for Historic Preservation Main Street Program, and the Committee for a Better New Castle.
- Growing Partnership with Delaware City – The next Discovery Zone to the south, Delaware City, and New Castle are considering joint initiatives to increase tourism.



*Trustees of the New Castle Common
 The Trustees have a history as old as New Castle because the common land has existed as such since the days of early Dutch colonization when New Castle was Fort Casimir in 1651.*

Now more than 200 years later, this body of 13 Trustees oversee a nonprofit charitable organization founded by William Penn, which was chartered in 1764 and incorporated by the Delaware General Assembly in 1792. The Trustees mission is to preserve and enhance the assets of the trust for the benefits of the inhabitants of New Castle.

In more recent years, the Trustees of New Castle Common have used their money in various ways. They bought and developed Battery Park, established the river walkway and wetlands rehabilitation, and encouraged historical preservation.

⁴For a history of the flood control system refer to <http://nc-chap.org/dikes/>

Byway Program Challenges

- Improving traveler services – Additional services could increase visitation and extend hours spent in New Castle complementing its already attractive retail services and a bed-and-breakfast establishment.
- Market demand study – Understanding the potential for business development and traveler services could guide the City, County and State's efforts to attract economic opportunities in heritage- and eco-tourism as well as compatible local jobs.

Byway Program Strategies and Recommendations

1. **Market New Castle's Assets:** New Castle has five active public museums. They include the Amstel House, Dutch House, Read House and Gardens, Old Library and Court House Museum, Buttonwood School and Court House Museum. Historic interpreters at the museums are telling the story but additional marketing is critical to attract tourists. Additionally, there are two churches that have been in continual use for over 300 years along with cobblestone streets, historic homes, storefronts, and civic and commercial buildings. Local parks and a Delaware River shoreline augment the attractiveness of the New Castle Discovery Zone with plenty to offer travelers of all ages. Catalyze partnerships with other Discovery Zones. Finally, support efforts to develop a broader Bayshore branding and positioning initiative.
2. **Make the New Castle Story Come Alive:** Expanding upon current programs and activities is important to engage the traveler in New Castle. One step is to find new opportunities to interpret how New Castle was settled by the Dutch, the Swedes and the English, and how it served as the Colonial Capitol of the Colony and was separated from William Penn and his government. New Castle historically had an active seaport that needs to be interpreted as part of developing today's waterfront.
3. **Promote New Castle Activities:** Continue to develop activities and tours that encourage visitors to walk the streets and enjoy the buildings and gardens or take a guided outdoor tour of the historic city. There is also the annual House and Garden Tour as well as tours of the Court House, Amstel House, Dutch House and the Read House. The City's restaurants and shops offer the traveler dining and shopping experience in a historic setting.
4. **Continue to Improve the quality of New Castle Experience:**
 - a. Parking is a concern and although there are designated parking areas for tour buses and visitors, the designated parking spaces on the streets are limited. Finding convenient parking for both residents and visitors is underway with the Parking Study.

- b. The placing of good wayfinding signs and historical information throughout the Discovery Zone, both in and out of the historic center is important for guiding and engaging travelers. Interpretive signs need to teach history and ecology of the area.
- c. The recent loss of two good restaurants indicates that retaining quality traveler amenities is needed and these restaurants need to be replaced.



The Kalmar Nyckel, Delaware’s Tall Ship makes ports of calls up and down the east coast but its home port is on the Christina River in Wilmington.

- 5. **Bring back Kalmar Nyckel:** Bringing back the tall ships, including Kalmar Nyckel, requires a pier that can handle this size ships. The City is already undertaking a study of the waterfront area for a new pier. Seeking funds and approvals for the pier’s design and construction is the next step.
- 6. **Continue to support partnerships:** The City should continue to partner with Bike Delaware to promote the trail system, Historic New Castle Alliance, and the Delaware Historical Society to continue efforts to protect and promote the City’s historical and cultural assets. Also continue to consider partnerships with neighboring Discovery Zones on initiatives of common interest.



Looking toward the Delaware River from the C&D Branch Canal, Delaware City



Delaware City’s historic district from the Chesapeake and Delaware Branch Canal

3.5 DELAWARE CITY DISCOVERY ZONE

Delaware City is the northern gateway to the natural beauty of the Bayshore region to the south. Included in the Discovery Zone are Fort

Delaware's Bayshore Byway

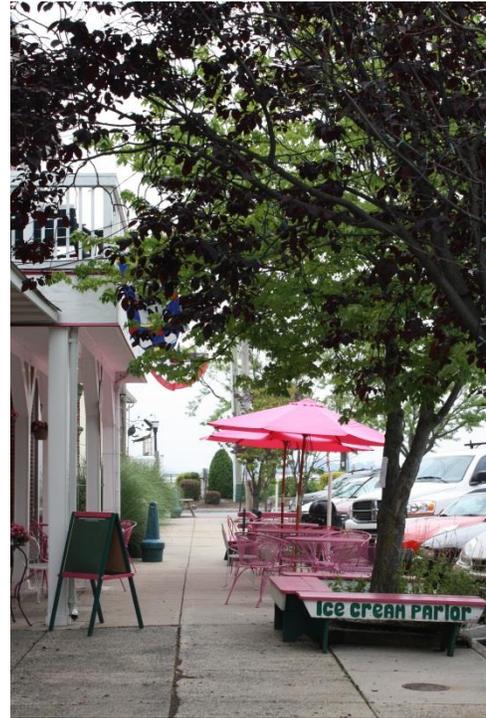
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DuPont State Park, Fort Delaware State Park and Pea Patch Island Nature Preserve, the Chesapeake & Delaware Canal (C & D), and the Dragon Run Natural Area. Within this Discovery Zone a visitor can find the cultural and natural qualities that bring history and outdoor recreational opportunities to life. It is an area that is actively engaged in initiatives to capitalize on these resources with public and private lands to support new eco-tourism-based development opportunities for residents and visitors. The road less traveled begins at Delaware City.

In 1801 Delaware City, then known as Newbold's Landing, was expected to grow to rival Philadelphia as a major Delaware River port and commercial center. Delaware City was a base for operations on the C&D Canal but also a way station for travelers. When the canal was shifted to Reedy Point after 1927, the economic benefits declined.

The Delaware City Historic District is one of the largest in the State of Delaware with more than 250 contributing structures that date back to the early 19th Century. Today, its charming streets, historic architecture and waterfront Canalfront Promenade welcome visitors. It is a great place to get out of the car or boat, and enjoy the traveler services and amenities found in this scenic setting. Delaware City is the departure point for the passenger ferry boats (Delaware City-Salem Ferry) to Fort Delaware State Park on Pea Patch Island, Fort DuPont State Park and Fort Mott State Park in New Jersey⁵.



Main Street Delaware City and the local merchants are working to increase the level of activity in town. This picture is an example of the activities encouraged in the business district.

- **Fort Delaware State Park** – Experience Civil War history today where living-history interpreters unfold this Union military post stories that held approximately 32,000 prisoners. The Fort is located on Pea Patch Island. The Delaware City-Salem Ferry provides access to the island from Delaware City. <http://www.destateparks.com/park>
- **Pea Patch Island Nature Preserve** – This small island, located in the Delaware River, is part of Fort Delaware State Park and home to one of the largest wading-bird nesting areas on the East Coast. Recognized by the National Audubon Society as an Important Bird Area, all of Delaware's nine species of herons, egrets and ibis nest on the island. The variety of wading birds offer quite a spectacle as they fly back and forth to the island during the spring and summer nesting season

⁵ Formerly known as the Three Forts Ferry, the Delaware City-Salem Ferry previously operated seasonally between Delaware City, Fort Delaware and Fort Mott in New Jersey. In October 2012, Super-storm Sandy significantly damaged pier and docking facilities at Fort Mott, according to the Delaware River & Bay Authority, which operates the service.



– a sight easily enjoyed from the Delaware City Canal Promenade. The bird sanctuary offers a hiking trail and an observation platform that provides views of birds flying to and from the nesting area and other wildlife on the island.

- Chesapeake & Delaware (C&D) Canal** – This 14-mile canal, which was privately built in the 1800's, crosses the northern Delaware / Maryland peninsula. It was purchased by the U.S. Government in 1919. It is listed on the National Register of Historic Places, and designated as a National Historic Civil Engineering and Mechanical Engineering landmark. The area is managed by DNREC's Division of Fish and Wildlife as the C & D Canal Conservation Area under an agreement with the U.S. Army Corps of Engineers. The Michael Castle Trail will support hiking, bicycling, and equestrian activities along the entire canal as shown in Figure 3-6. This exciting addition to the canal area will be a significant draw to the Discovery Zone and will be a way for more people to experience the wild character of the canal and the area surrounding Delaware City.

**Route 9 Coastal Heritage Byway
Bike/Ped Connector FY2012 FHWA
Scenic Byway Grant Award to
Delaware City**

This project entails planning, design and development of a construction document package that will be competitively bid for the construction of a multi-use bike-pedestrian facility directly adjacent to the Byway at Delaware City. This facility will directly link to the Branch Canal Trail to connect Fort DuPont to a regionally important multi-use trail, The Mike Castle C&D Canal Recreational Trail for byway visitors and city residents.

- Gateway to the Michael Castle Trail** – Delaware City will build a 0.25-mile trail, the gateway to the Michael Castle Trail. Main Street Delaware City, an organization affiliated with the National Trust for Historic Preservation, is committed to assisting residents, local merchants and property owners in enhancing their property values, boosting their businesses, and promoting a healthy community where people want to live and work, recently was awarded a Byways Grant to fund the planning and design of a bicycle and pedestrian facility for byway travelers, Delaware City residents and others utilizing

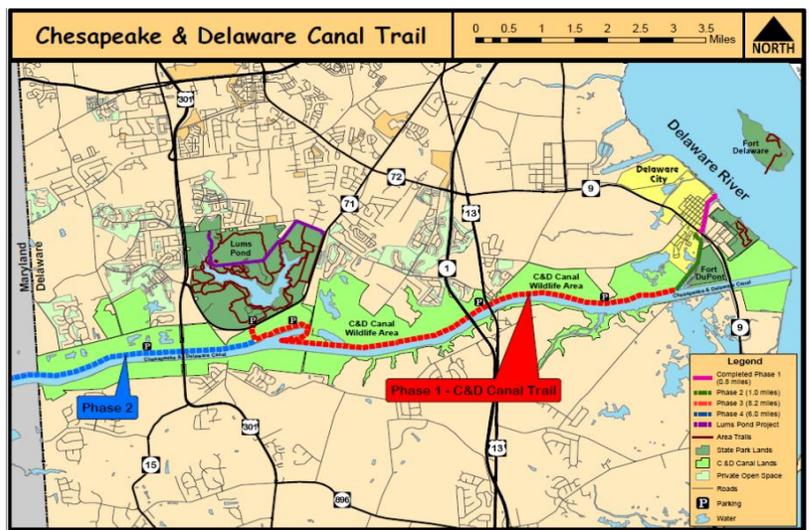


Figure 3-6: Chesapeake & Delaware Canal Trail Map. The trail is now known as the Michael Castle Trail.

the Michael Castle Trail. This project will be a link for the easternmost extension of the Trail and provide access to the Fort DuPont campus. The master plan for Fort DuPont calls for the creation of a mixed use development that will be annexed into Delaware City. This byway grant project will be one of the first projects to be implemented that aligns with the vision of the Master Plan.

- **Fort DuPont State Park** – This former World War II military outpost offers quiet views of the river and historic structures that summon the imagination to think about daily life of the Fort in the past. Fort DuPont is also a popular site among local birders because of the diversity of habitats found in a relatively small area along the river. Coupled with other amazing bird-watching and scenic viewing opportunities in the Discovery Zone, Fort DuPont is highly recommended to visitors from near and far as part of any tour along the byway
- **Dragon Run Natural Area** – This State-recognized Natural Area is one of the largest freshwater marsh systems in Delaware. Dragon Run's riparian corridor boasts diverse and colorful freshwater wetland plants including arrow head, marshmallow, water lily, duckweed, cattails and arrow arum. The marshes and open water abound with wildlife including muskrats, turtles, waterfowl, rails and other migratory birds. The marsh can be viewed from Dragon Run Park or by joining a guided paddle through the stream's quiet waters.

Current Amenities and Initiatives Related to the Byway

Existing amenities and services suggest a diverse and destination-oriented focus for this Discovery Zone. Delaware City's Crabby Dicks restaurant is well-known in the region for both its food and special events and anchors other eating establishments and retail shops along its historic main street. Several other businesses and popular restaurants including Kathy's Crab House are found on Route 9 as it traverses through the City limits. A small number of rooms for overnight stays are available in town. Fort Delaware State Park has a visitor center with a ticket office, gift shop, and restrooms at the ferry dock adjacent to Battery Park in town.

This Discovery Zone faces a similar challenge as the New Castle Discovery Zone – visibility. As with New Castle, Delaware City is taking a proactive lead in developing opportunities for the City and the Byway. Seeing the opportunity to ultimately rebrand this Discovery Zone as a center for eco-tourism is underway. Highlighting its historical setting is also progressing.

Efforts are underway by the City and the Delaware City Main Street organization to create incentives for the development of tourism and attracting eco-tourism and outdoor recreational-related businesses.

- **Historic Central Hotel** – This prime downtown anchor property on the C & D Branch Canal was renovated through a Transportation Enhancements grant and with City investments. It presents an opportunity to create economic development opportunities as well as serve as an anchor along Main Street and the C & D Branch Canal. The hotel will become the North American headquarters of the American Birding Association.

- *Washington Street Commercial District* – An important part of the mission of Main Street Delaware is to expand upon resident and visitor services and amenities in the historic district of Delaware City. This provides an opportunity to work with the merchants and businesses to increase activity in the commercial district.
- *Water-related Events and Activities* – Activities such as fireworks shows, where people watch from their boats on the water and from the Promenade along the canal and from Battery Park along the Delaware, eco-tourism along the C & D Canal, and events and receptions at the forts are important activities for travelers to become a part of the community.
- *Dragon Run* – Dragon Run is a good place to organize paddling trips and view wildlife.
- *Delaware City Marina* – With the Branch Canal and a marina capable of mooring large pleasure craft, including the Delaware City-Salem Ferry, this Discovery Zone is already a key starting point for water-based eco-tourism, organized as group tours or with facilities located down river for larger water craft.
- *Take a Walk* – An eco-tourism and healthy lifestyle initiative, marketed through Main Street Delaware City, is planned to capitalize on access to, and awareness of, the area’s natural resources and outdoor recreation activities that can potentially transform this Discovery Zone. Planned improvements include:
 - The construction of the Michael Castle Trail and trailhead and an accessible viewing platform with six interpretive panels;
 - Pedestrian bridge linking Canalfront Promenade and the Governor Bacon complex at Fort DuPont State Park;
 - Delaware Historical Society garden;
 - Potential rail line trail; and,
 - Links and public access to Dragon Run Natural Area.

*Eco-tourism is defined as
 "responsible travel to natural areas
 that conserves the environment and
 improves the well-being of local
 people." (TIES, 1990)*

*The International
 Eco-tourism Society (TIES)
<http://www.ecotourism.org>*

The Draft Ecological Assessment and Restoration Concept Report of the Delaware City Eco-tourism Plan⁶ highlight the diversity of the natural assets in the Delaware City Discovery Zone. The report states that Delaware City is situated in a natural setting that makes it an ideal eco-tourism destination. A key component of the City’s strategy is to enhance, make accessible, interpret and market ecologically based tourism opportunities to attract visitors to this inviting riverfront town. Main Street Delaware City notes

⁶ Biohabitats, Incorporated, *Draft Ecological Assessment and Restoration Concept Report*, prepared for Main Street Delaware City.

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over nine ecological resources that the organization considers significant to Delaware City are found here, many of which are publicly owned and accessible. Recommendations that support this eco-tourism focus involve numerous ecological restoration projects – wetland enhancement and restoration, reforestation planting, invasive species control, meadow and scrub-shrub management and shoreline restoration.

Fort DuPont State Park/Governor Bacon Complex – The development and implementation of a public/private Master Plan for this state-managed Complex is an important factor for this Discovery Zone. Led by DNREC, and involving stakeholders that include New Castle County and Delaware City, the goal of the master plan for the 443-acre underutilized property is to attract private-sector interest and financing for the creation of an active sustainable mixed-use community that will produce new tax revenues, jobs and housing choices along with recreational and other amenities. Integrating this redevelopment seamlessly into the Delaware City community is a project goal. The Plan will undoubtedly take a decade or more to realize requiring diligence by the stakeholders to insure plan implementation.

An increasing number of governmental, non-profit and private-sector business leaders have recognized the potential for eco-tourism and heritage tourism based economic development within the Delaware City Discovery Zone, its geographic location and its designation as a National Register Historic District. Fort DuPont State Park is strategically located along Route 9 and the Delaware River and bounded by the C & D Canal on the south and the Branch Canal, currently separating it from Delaware City, on the north. Within the historic nature of the site, it is believed that a limited mixed-use development program will be successful, infusing the area with a vibrant economic generator. Because DNREC is preparing the plan concurrently with the CMP, the final plan is still in development. The environmental constraints of the site limit the amount of potential development.

DNREC currently operates a boat ramp in the Fort DuPont Complex. The facility has a parking lot capable of holding 100 cars.

Byway-Related Opportunities

- *Marketing and Positioning* –Delaware City and Main Street Delaware City are actively



Many buildings, such as the military houses in the photograph, are empty but have the potential to generate revenue and revitalize this important historic site in synergy with the byway vision.



The future home of the Delaware Military Museum



marketing the City and its surroundings to attract visitors and grow their economic base. Efforts to promote the Delaware City area as a destination would benefit greatly from a Bayshore-wide approach to positioning and marketing the entire area, including the Byway's Discovery Zones. Delaware City is a natural stopping point for visitors from the north and west. The City and its nearby natural and historical attractions are a perfect beginning point for any visit.

- *Traveler Services* – As visitation increases, Delaware City could be a center for traveler information and services. A visitor center with information on interpretation, points of information, refreshments, provisions and restrooms, for the Bayshore and the Byway could be located in the town or in the Fort DuPont Complex. Overnight accommodations would increase the opportunity to attract visitors.
- *Delaware City Marina* – The marina is heavily used by boats of all sizes. With careful expansion to accommodate watercraft capable of traveling the Intercoastal Waterway, it could further its mission as a port of call for eco-tourism from the water and meet the increased demands of a revitalized Fort DuPont.
- *Route 9 Gateway to Delaware City* – An opportunity to enhance the visual appearance while providing for wayfinding elements and multi-modal facilities along the Byway. Support and build on recommendations in the Delaware City Transportation Plan⁷, prepared by WILMAPCO and approved by the Delaware City Council:
 - Extend sidewalks to complete pedestrian facilities on both sides of Route 9.
 - Extend striped bicycle lanes on Route 9 to implement DeIDOT Bicycle Plan and provide for local trips.
 - Install traffic calming measures to improve multi-modal activity.
- *Washington Street Urban Design Elements* – An opportunity to build upon the recommendation in the Delaware City Transportation Plan to take advantage of this street's wide cross-section that will provide facilities for all users – vehicular, bicycle and pedestrian while improving the appearance of the street. Consideration for a boulevard design could provide for green infrastructure elements and give prominence to Washington Street.
- *Clinton Street Improvements* – An opportunity to enhance the appearance of this main street and provide for wayfinding elements and traffic calming measures. Clinton Street is quite wide and provides for parking on both sides. Traffic calming measures would improve the ability of pedestrians to circulate easier.
- *Increasing Activities at Dragon Run Park* -- Adding interpretative signs and observation platform would highlight the opportunities to increase activities.

⁷ WILMAPCO, *Delaware City Transportation Plan*, May 2009.

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Creating opportunities for the Discovery Zone traveler to enjoy these resources is critical, and may take such forms as improved public access, interpretation and programming. Linking these outdoor recreation activities with the City's downtown amenities and future development of the Governor Bacon complex can enhance the byway traveler experience, as well as being economically beneficial for Delaware City.

Byway Program Challenges

- *Implementation dependent upon outside funding and investments* – There are no major industries within the city limits, which limits the ability of the City to fund major initiatives. Consequently, it depends upon grants and other levels of government for activities beyond regular operating funds. Although the City is successful in attracting grants, it must always remain vigilant for such opportunities as time goes on.
- *Visual impact of surrounding industries* – The Delaware City Refinery and across the river in New Jersey, the Salem Nuclear Power Plant, set the atmosphere for Delaware City among many potential visitors. Even with the continuous efforts by the City to market itself as a center of eco-tourism and history, many continue to perceive of the Delaware City environs as a symbol of heavy industry.

Byway Program Strategies and Recommendations

1. **Market Delaware City as a northern gateway to the natural areas of the Bayshore:** Continue the existing eco-tourism initiative by integrating this with a plan to brand and market the Bayshore and Byway Branding. Programming, events, tours and interpretive materials are needed to continue to attract residents and visitors to this Discovery Zone. As the elements of the Fort DuPont Master Plan begin to emerge, and the potential for connections to the town are clarified, additional opportunities will emerge to connect the town to its surrounding natural areas.
2. **Strengthen the Relationship with Port Penn:** Flanking both sides of the C & D Canal, both communities are surrounded by exceptional natural areas that could be jointly promoted.
3. **Strengthen the Relationship with New Castle:** The two communities share a historic past and could benefit from joint programming and marketing.
4. **Implement the Ecological Restoration Projects:** Outlined in the Delaware City Ecological Assessment and Restoration Concept Report are a number of projects to restore and enhance existing natural resources. Some efforts are already being accomplished. If these resources are preserved and improved, they present opportunities for



The historic Cleaver House – at the crossroads of commerce in Port Penn.



enhancing public accessibility and attractive settings that support Delaware City and the Delaware Bayshore and Byway as an eco-tourism destination.

5. **Fort DuPont State Park/Governor Bacon Complex:** The Master Plan will require a substantial effort to implement. No community will benefit more than Delaware City from the successful implementation of the Plan. The City must continue an active role in the development and implementation of the plan, steering it in a direction that supports the vision and goals of the City and the Byway Corridor Management Plan.
6. **Move forward Transportation Plan recommendations:** To encourage a safe and attractive setting for the byway traveler, whether on foot or bike or in a car or boat, the following projects should be completed. The projects will require funds to implement design and construction:
 - a. Enhance the Route 9 Gateway in Delaware City: Provide for traffic-calming measures, such as sidewalks, crosswalks, bicycle lanes and landscaping to achieve streetscape improvements on the byway.
 - b. Re-examine the Washington Street Urban Design Plan: Before moving forward with improvements to this street, a study should be done to evaluate the proposed recommendations for integrating urban design solutions that complement the byway and address the width of the existing street. A boulevard design may be a better solution.
 - c. Undertake Streetscape Improvements to Clinton Street: Examine design and programming solutions to encourage new businesses, to assist existing businesses and attract residents and visitors to this Main Street. Improvements might include wayfinding signs and traffic-calming measures.

3.6 PORT PENN/AUGUSTINE DISCOVERY ZONE

A good place to learn about the story of this Discovery Zone is at the Port Penn Interpretive Center managed by Delaware State Parks. The center offers displays and programs that explain the folk life of the historic shoreline communities of the Delaware River and Bay. Self-guided walking tours are available featuring the historic homes of Port Penn, as well as the scenic marshlands surrounding the town.

Most of Port Penn is on the National Register of Historical Places. Marshes and the Delaware River that parallel Route 9 offer bird watching, wildlife viewing, fishing and nature-based photography. The area also fosters opportunities for bicycling, hunting, crabbing and trapping. Much of the land surrounding Port Penn and Augustine Beach is still actively farmed today. Historical structures such as a muskrat-skinning shack and floating cabins – indicative of Port Penn's rich past – are featured Interpretive Center exhibits.

The story of Port Penn, a charming waterfront village, was envisioned to be a major port city and tourist attraction. It is a town that has developed in harmony with the cycles of nature. Centered within the

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natural areas of Augustine Wildlife Area and Thousand Acre Marsh, Port Penn is just a short distance away from a magnificent coastal plain habitat.

The Port Penn Interpretive Center houses exhibits, brochures and seasonal staff that tell the story of the area's natural and cultural history and celebrates the place-based heritage of reliance on land and water resources to support livelihoods. The hours of operation of the Interpretive Center are limited. The Port Penn Wetland Trail provides access to this Discovery Zone's marsh habitat while a pathway alongside the historic Cleaver House offers direct access to the Delaware River. Kelly's Tavern a popular seafood bar and restaurant can be found in Port Penn.

Augustine Wildlife Area⁸ – This state wildlife area is comprised of five units totaling 2,667 acres located on the Delaware River. Each unit provides ample opportunity for viewing birds and other wildlife, waterfowl blinds and deer stands for hunting as well as access to water for fishing and crabbing. The Port Penn Trail is a one-mile path through tidal marsh, connecting the Interpretive Center with Augustine Wildlife Area and the river. You can also walk along the Lang Marsh levee for great views of the river and impoundment. An existing interpretive sign on the levee explains the importance of area wetlands for wading birds nesting on Pea Patch Island. Augustine Beach, in addition to the views of the Delaware River and the New Jersey coastline, offers a boat ramp, picnic tables and a large parking area. Parking area landscape plantings and shade pavilions for the picnic tables would improve site aesthetic appeal. Nearby the historic Augustine Hotel is currently undergoing renovations. Three units of the Augustine Wildlife Area have activities for the public:

1. **Thousand Acre Marsh** – Part of the Augustine Wildlife Area, the Thousand Acre Marsh is an ecologically important freshwater wetland that is in the process of being restored by DNREC. The invasive plant commonly known as Phragmites is being treated by DNREC to restore native marsh vegetation. The Thousand Acre Marsh provides significant habitat for waterfowl during the fall and winter, foraging herons and egrets nesting on Pea Patch Island, and roosting and feeding shorebirds moving through the area in the spring and fall. Many other nesting and migratory birds can be found in the marsh, and other wildlife can also be seen in the marsh and surrounding upland habitat. With the acquisition of nearly 200 acres known as the Yardley Dale Tract, DNREC will be providing access to the marsh for hunting, birding, scenic viewing and hiking. Birders can also drive Reedy Point Road from Route 9 near the base of the



Augustine Beach

⁸ Throughout the Discovery Zones are natural areas that are not only great places for outdoor recreation but they are also globally significant. A great source of information about the activities at each can be found at the website of ecoDelaware. <http://www.ecodelaware.com/>



Reedy Point Bridge to Dutch Neck Road to view the north end of Thousand Acre Marsh and the C&D Canal.

2. **Silver Run Tract** – At the Silver Run Tract on the east side of Route 9, there is a 1-mile round trip unimproved trail through forest and field to the edge of the marsh and back. This trail is primarily used by hunters but is accessible outside of the hunting season and on Sundays year-round for wildlife viewing. No visitor services are available.
3. **Green Tract** – Just south of Silver Run, the Green Tract features a 3.2 mile round-trip unimproved trail through farm field, marsh and woodland then to the bay and back. This trail is primarily used by hunters and is accessible outside of the hunting season and on Sundays year-round for wildlife viewing. Signs and restrooms are lacking.

Byway-Related Opportunities

- *Augustine Wildlife Area* – In general, the tracts the wildlife area contain many opportunities for viewing nature at its best. With improved access, facilities and wayfinding, its capacity to attract more visitors is improved.
- *Augustine Beach* – This area is frequented by residents and draws boaters and anglers from the Wilmington area because of its easy access to the Delaware River. Repairing and enhancing the area's facilities is needed to make this a quality Discovery Zone destination.
- *Augustine Inn* – A local institution has been closed for many years. The current owner plans to renovate and reopen the facility.
- *Port Penn Wetland Trail* – Walking and cycling links from this trail to Port Penn offer the traveler an alternative opportunity to experience this Discovery Zone, providing exposure to the natural and historic resources along its path. Currently, DNREC and Port Penn are discussing options to improve the existing trail system to include:
 - Locate and install an observation tower for birders;
 - Improve the existing trail system with spurs and relocations;
 - Improve the dike system (owned by DeIDOT) that protects Route 9 and Port Penn and the operation of the associated impoundment basins⁹; and,



DNREC is developing a trail around Port Penn making the wetlands accessible to the public. This boardwalk trail connecting to Augustine Wildlife Area already exists.

⁹ Improvement of the dike system is a costly project and funding has not yet been identified. The level and type of improvement implemented will depend upon the level of funding identified.

- Improve signing and other communications to the public regarding available facilities and permitted activities.
- *Interpretive Signs* – This Discovery Zone has interpretive signs that tell its history in and around Port Penn. Additional signs and materials could further enhance the traveler experience of learning about Port Penn and Augustine Wildlife Area.
- *State Programs* –The Divisions of Parks and Recreation and Fish and Wildlife maintain historic and natural attractions that are open to the public. Existing interpretive programs, which if expanded, could enhance opportunities for travelers to learn about the byway's natural and historic resources, and engage in activities that encourage repeat visits.
- *Port Penn Historical Society* – The Society runs programs to educate visitors about the rich history of Port Penn and the people who call it home. Supporting their activities preserves this history and the history of the Bayshore.
- *Partnering with other Discovery Zones* – Port Penn by itself has a lot to offer a visitor but by itself may not be a strong enough destination to attract visitors. Port Penn and nearby Delaware City together create a stronger attraction than each does separately.

Byway Program Challenges

- *Sea Level Rise* – Recent storms have highlighted the vulnerability of the area and have highlighted the urgency to address sea-level rise. Dike repair and raising the level of Route 9 above typical flooding levels are potential solutions that can address the challenge. While these infrastructure improvements are expensive and may take some time to implement, short term strategies such as warning systems and improved evacuation planning should be considered.
- *Safe parking areas* – It is important to improve and enhance parking for visitors that come here to fish, crab, bird, paint, and photograph the beauty of the Bayshore landscape. This issue should be considered as improvements are planned for each natural area.
- *Road-side trash* – Maintaining the beauty of the byway will require solutions for eliminating accumulated road-side trash. DelDOT's Adopt-a-Highway Program is a good vehicle to address roadside trash, as are carry in-carry out policies for trash.
- *Bicycle facilities* – With the trails and natural areas close to the town of Port Penn, the system of trails and streets could provide the ability for bicyclists to circulate through the historic village and access the nearby natural areas. The needs of bicyclists should be considered as improvements are planned.

Byway Program Strategies and Recommendations

1. **Identify Wildlife-Viewing Wayside Pull-off Areas:** Locations should be identified along Route 9 and within this Discovery Zone that will provide for safe birding, fishing, crabbing and hunting that include sufficient parking and facilities for visitors.

2. **Improved Wayfinding, Trail Marking and Observation Areas:** Augustine Wildlife Area units of Port Penn, Yardley Dale, Green and Silver Run need interpretative signs and improved observation areas as well as wayfinding signage along Route 9. Widely distributed brochures would also attract visitors.
3. **Address Flood Impacts:** This area is prone to flooding, which closes Route 9 during extreme high tides and during coastal storms. The frequency and duration of these impacts are anticipated to worsen with sea-level rise. Continue to coordinate with the Sea Level Rise Adaptation Committee to insure that an acceptable strategy for Port Penn and its surroundings is developed to manage flooding and maintain long-term access to activity areas.
4. **Control Roadside Litter:** Establish a sponsoring organization or Friends of the Byway to begin a campaign to educate travelers about litter; to hold clean-up events and to work with state agencies and others to maintain an attractive roadside as part of DelDOT's Adopt-a-Highway Program.
5. **Improve Augustine Wildlife Area Amenities:** Produce a plan that identifies future comprehensive improvements such as:
 - a. Bicycle racks;
 - b. Additional shade trees for the picnic area and a picnic pavilion;
 - c. Because the area is low lying, the installation of composting toilets may not be feasible. Should that be the case, arrange with local businesses to open their facilities to the public;
 - d. Re-design the parking lot to break up the expansive asphalt; design a more attractive beach area; design safer bicycle and pedestrian access, and design landscape improvements to filter off runoff; and,
 - e. Provide shade and other native plants to beautify the area both from the Byway and the water.
6. Partner with neighboring Discovery Zones, in particular, Delaware City to promote eco-tourism opportunities.

3.7 ODESSA DISCOVERY ZONE

Although this Discovery Zone is off the main spine of the byway, it is linked to it by the Appoquinimink River. Historic Odessa will not be disappointing. Listed on the National Register of Historic Places, this beautifully preserved 18th Century town, seated on the Appoquinimink River, was originally known as Cantwell's Bridge. Odessa played a vital role in commercial life along the Delaware River as a busy grain shipping port. Guided tours of Odessa's historic homes offer a step back in time as one strolls the brick sidewalks.

Delaware's Bayshore Byway

CHAPTER 3 – INTRODUCING DELAWARE'S BAYSHORE INITIATIVE AND THE BYWAY'S DISCOVERY ZONES



The Historic Odessa Foundation, incorporated in 2005, leads the effort to preserve and encourage the use of its historic buildings by the general public, students, and scholars in order to learn and appreciate



Corbit-Sharp House
Photo courtesy of Historic Odessa Foundation

the history, architecture, daily life, and furnishings of Delaware's colonial period. The Foundation conducts tours of the historic houses, and prides itself in the educational component of its mission by paying special attention to children. For example, children's tour groups are given a cap and a haversack, containing a spyglass, slate and slate pencil, fire starter kit, pocket watch, and a Bilbo catcher. Special activities include age-

appropriate school lessons, a copy of "Rules for Behavior in Company," and a Corbit-Sharp House scavenger hunt.

Byway-Related Opportunities

- Historic Houses of Odessa – There are a significant number of well-preserved and attractive homes lining Odessa's intact historic district. The visitor can experience life in the 18th Century by visiting the Corbit-Sharp House as well as the other houses. Lovely shade trees and gardens lining the streets make for pleasant walks.
- Appoquinimink River – This 16-mile waterway meanders through farmlands and wetlands as it links the Odessa Discovery Zone to the Delaware River making it part of the Bayshore story. The tidal freshwater segment of the Appoquinimink is bound by the head of tide at Noxontown Pond and Silver Lake, and by Drawyer Creek's confluence with the Appoquinimink. The remainder of the watershed consists of a tidal marsh extending to the Delaware River. The beauty of the River can be seen upon entering Odessa from the Byway. Access to the river, however, is limited by safety issues and the lack of downstream access points.
- Partnerships – There is a strong potential for The Historic Odessa Foundation to partner with the Historic New Castle Alliance and the Trustees of New Castle Commons on initiatives that strengthen the historic heritage of both communities.

Byway Program Challenges

Route 13 – Route 13 is a one-way pair of streets as it passes through Odessa. Even though most of its former traffic has shifted to Route 1, it is still a busy roadway and a challenge to cross for pedestrians. The Town is concerned about the safety of the two intersections where DE Route 299 crosses US Route 13 as well as what the intersections would look like if improved. Only context sensitive designs, befitting



View across Cedar Swamp Wildlife Area



the historic nature of the Town, should be considered. Wide streets for vehicles detract from the historic setting.

- Historic Odessa – An ongoing challenge for this community is the protection of Odessa from development that is not in keeping with the historic character of the town.
- Tourism and visitation – Because this Discovery Zone is not directly on the byway, it is critical to develop marketing plans that encourage increased visitation to the historic museum attractions and events and address Byway related signing
- Interpretation – Capturing and telling the story of this Discovery Zone in a manner that respects Odessa, which, at its heart, is a residential community, will be a key to its preservation as one of Delaware’s historic jewels.

Byway Program Strategies and Recommendations

1. Support the Historic Odessa Foundation in fulfilling its mission of making the history of Odessa accessible to Delawareans of all ages as well as relating its unique past to the history of other Discovery Zones.

3.8 CEDAR SWAMP/BLACKBIRD CREEK DISCOVERY ZONE

This Discovery Zone is focused on two significant natural areas offering opportunities to venture into the great outdoors. Getting out your binoculars, fishing pole and cameras is a must when visiting and learning about Cedar Swamp and Upper Blackbird Creek.

Cedar Swamp State Wildlife Area – Totalling almost 5,000 acres, this area encompasses an extensive tidal marsh providing ample opportunities for hunting and wildlife viewing. Cedar Swamp is the least developed of the byway wildlife areas and refuges. Cedar Swamp is used primarily by hunters and experienced birders. The historic Vogel House is located next to an historic water tower. The house and surrounding property was once an old nursery dating back to turn of the century. A ½ mile loop trail winds down by the river and through the marsh and then back to the house. A family burial plot dates to the late 1700s and early 1800s. There are sweeping scenic views of the marsh and river from Collins Beach Road. At the end of the road, there is a state boat ramp and fishing access area and a parking lot. Planning is needed to sensitively

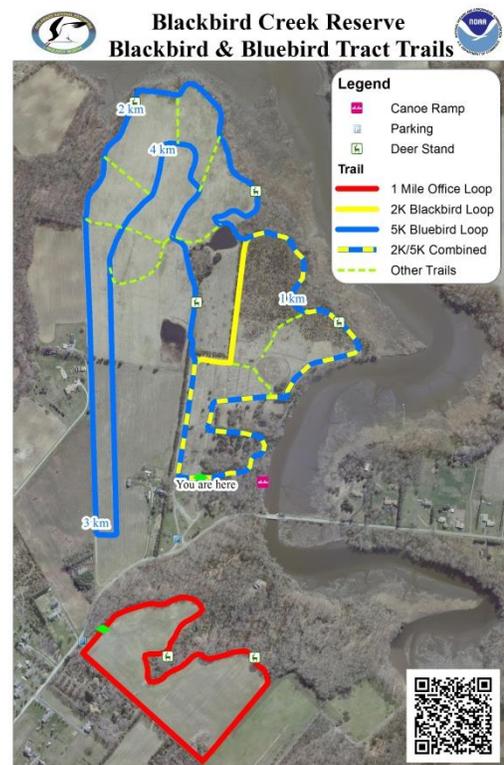


Figure 3-7: Map of Blackbird Creek Trails

develop appropriate visitor amenities that balance resource protection with resource use.

Upper Blackbird Creek Reserve – This area is part of the Delaware National Estuarine Research Reserve, a partnership between the National Oceanic and Atmospheric Administration and DNREC, Coastal Programs. Six tracts of land consist of a former campground, upland woods, fallow fields, extensive tidal marsh, farm ponds, riparian woods, upland forest stands, stream valleys, active agricultural fields and non-tidal wetland depressions. A canoe/kayak launch is located near the entrance on Blackbird Landing Road. Information boards provide hunting and trail information.

The 1,087 acre Blackbird Creek Reserve boasts several miles of trails, as shown in Figure 3-7, through uplands and along the marsh. A canoe/kayak launch, restoration demonstration areas as well as a variety of programs and volunteer opportunities for the community, teachers, students, and families are supported. The Reserve also supports ongoing research and monitoring, field studies, citizen monitoring programs, and training opportunities for coastal decision makers. In addition to the protection of the natural ecological system, there is interest in constructing a new pavilion with restrooms at Blackbird Creek Reserve. A number of other facilities are also recommended including composting toilets, trail construction and interpretation that will improve amenities at this byway resource.

“The ecological and cultural setting in which the Blackbird Creek Reserve resides is connected by a history of farming, fishing, hunting, trapping and other resource uses that have long been cornerstones of the local communities and their economy.”

(Biohabitats, March 2007)

Byway-Related Opportunities

- **Delaware National Estuarine Research Reserve (NERR)** – The Reserve was established in 1993 with a mission to practice and promote stewardship of coasts and estuaries through innovative research, education and training using a place-based system of protected areas. Today, as one of 28 National Estuarine Research Reserves protecting over 1.3 million acres of coastal and estuarine habitat across the country, the Delaware NERR serves as a living laboratory and classroom where research methods and management approaches can be piloted and applied to issues of local, regional, and national importance. For 20 years the Delaware Reserve has played a role in supporting local decision-making, advancing public understanding of Delaware’s coastal and estuarine ecosystems and providing scientific information to support its wise management by:
 - Serving as a living laboratory to support coastal research and long-term monitoring, and to provide facilities for on-site staff, visiting scientists and graduate students. The Reserve also serves as a reference site for comparative studies on coastal topics such as ecosystem dynamics, human influences on estuarine systems, habitat conservation and restoration, species management, and social science.

- Providing up-to-date scientific information and skill building opportunities to individuals who are responsible for making decisions that affect coastal resources. Through the Coastal Training Program, the Delaware Reserve can ensure that coastal decision-makers have the knowledge and tools they need to address critical resource management issues of concern to local communities.
- Serving as a "living classroom" for educators, students and the public in general. The Reserve takes a local approach in advancing estuary literacy and generating meaningful experiences for people interested in learning about, protecting and restoring estuaries.
- Protecting and conserving over 6,200 acres of coastal and estuarine habitat within the Reserve to facilitate improved stewardship of coastal habitats outside reserve boundaries using the best available science to maintain and restore healthy, productive and resilient ecosystems.
- **An Outdoor Experience** – This Discovery Zone offers a diversity of outdoor recreational activities and facilities including trails (1 mile, 2K, 5K), a canoe/kayak launch and more traditional uses, such as hunting and fishing.
- **Blackbird-Millington Corridor** – A conservation plan for this special landscape is led by The Nature Conservancy in collaboration with non-profit organizations, state agencies, local families, farmers, hunters, loggers, hikers and scientists. It centers on studying, protecting and restoring the 52,000 acre band of undeveloped lands and waters embracing farms, fields and diverse habitats. The barking tree frog and feather foil are only two of the many amphibians and plants found in this unique landscape.

Byway Related Programs and Strategies

1. **Trails:** Trails can be developed for wildlife viewing in areas where there is no hunting or where hunting is permitted, outside of hunting season (late spring, summer and Sundays year round).
2. **Wayfinding and Interpretation:** Signs and maps integrated with information on the internet are needed to help travelers find this area and learn more about the history. There is also some forgotten history about this area having once been a 'resort' character with carousel, hotel and boardwalk. The Bayshore as a 'resort' area is another piece of the story of the past. These resorts did not survive, and for many all traces are gone, (e.g., at Cedar Swamp where at low tide from the boat ramp you can see remnant of pilings that apparently once supported either a pier or hotel).

3.9 WOODLAND BEACH DISCOVERY ZONE

Nestled within the natural wonders of the Woodland Beach Wildlife Area is the hamlet of Woodland Beach, one of Delaware's undiscovered treasures. This beachfront community once boasted a roller coaster. Today, only a handful of people live here. It is still home to fishermen, crabbers and families

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who have lived there for generations. It once had a hotel and a restaurant but with the decline in population, both closed. A movement is afoot to bring back the restaurant as an adjunct to Croaker's, an anglers' supply store.

Woodland Beach Wildlife Area – The Woodland Beach Wildlife Area is comprised of more than 6,300 acres along Route 9, due east of the Town of Smyrna. Most of the wildlife area – comprised of marsh, field and woodlands – is widely known for its hunting and fishing opportunities. The Taylors Gut area along Route 9 is popular with birders who scan the impoundment mudflats and ponds along Route 9 for shorebirds in the spring and fall. An observation tower provides spectacular sweeping views of the marsh and ponds next to Route 9.



Aerial view of Woodland Beach

The Aquatic Resources Education Center offers programming to the public to increase their awareness of, and appreciation for, Delaware's aquatic resources. Programming contains habitat-based field programs, including ones focusing on wetlands, the Delaware Bay horseshoe crab phenomenon, and a variety of other education directed activities. Staff provides educators with opportunities, resources, and knowledge to assist them with the development and delivery of wetlands education programs and experiences statewide. The Center also provides fishing and other outdoor aquatic experiences for segments of the population that lack such opportunities. The wetland boardwalk and trail connecting the Center to Lighthouse Road are open to the public. For additional information, see this website.

<http://www.dnrec.delaware.gov/fw/Education/Pages/Aquatic-Resources-Education-Center.aspx>

The Center's Mallard Lodge overnight facility has accommodations for up to 34 individuals for an overnight stay or, up to 40 using the building as a conference room/meeting place for training and "in-service" workshops in wetlands and environmental education. The facilities are available for use by public/private school groups, youth groups, conservation organizations, non-profit organizations, and government agencies. Educators who conduct Aquatic Education programming receive priority for lodge use. A small visitor center with an outdoor interpretative kiosk will be constructed within next 18 months at the Mallard Lodge and Aquatic Research and Education Center campus.



Most of Lighthouse Road just north of the Center is closed to vehicle traffic, though travelers can park near the gate and take a peaceful two mile walk or bike ride to the bay. In the hamlet of Woodland Beach, there is a boat ramp used by anglers, boaters and paddlers destined to the marsh of Taylors Gut or out into the bay. In the center of the community, the Wildlife Area offers plenty of parking for anglers to access the fishing pier or travelers stopping by to relax on the sandy beach.

Mudflats exposed at mean low water are habitat for muskrat, rabbit, marsh birds, waterfowl, shorebirds and waders, lovingly described in Dudley C. Lunt’s *Taylors Gut* and Tony Florio’s *The Progger*¹⁰. The area includes a large waterfowl refuge with mowed pastures, freshwater ponds, and forest tracts that are habitat for many species of songbirds and other wildlife.

Byway Related Challenges

- *The Narrow Route 9 Roadway:* Route 9 through the Woodland Beach Discovery Zone has little or no road shoulders as it travels through the marshland especially at the Taylors Gut Impoundment. A drainage ditch adjacent to the travel lanes eliminates safe pull offs to crab, collect bait and view birds.
- *Sea Level Rise and Flooding* – Flooding occurs across Route 9 especially at the base of Flemings Landing Road just north of Woodland Beach, south of Mallard Lodge, and at the Taylors Gut Impoundment water-control structure.

Byway Related Programs and Strategies

1. **Signing:** Interpretative and trail signing is needed at multiple points of interest in this Discovery Zone.
2. **Observation Platform:** The existing observation tower on the north side is needed and an additional tower is needed near the Taylors Gut impoundment area. This area is rich with birds and scenic views.

The Delaware Marsh is the “Home of the muskrat, opossum and otter, waterfowl and shorebird, turtle and terrapin, fish and crab, the marsh represents the last truly wild area of Atlantic America.”

Tony Florio

Florio lived his life on the Delaware marsh, worked there, brought his wife there, raised his children there and met all kinds of unforgettable characters there - including the furry and feathered kind. He worked as a resident biologist with the Division of Fish and Wildlife for 38 years, and lived 32 of those years in a remote area of Delaware’s marshland - a place unspoiled by the relentless development of today.

There is a short ‘wildlife drive’ – known as Florio Road leading from Route 9 back to the now-private residence where travelers can view the fields and ponds from their cars without disturbing the waterfowl in the fall and winter.

¹⁰ See Tony Florio, *Progger: A Life on the Marsh*, (Dexter, Michigan: Thomson-Shore, Inc., 2002) and Lunt, *Taylors Gut*.

3. **Pull-off Area:** There are extraordinary views of wildlife and terrain along Route 9 in this area. A pull-off area would be ideal for Byway visitors.

3.10 BOMBAY HOOK DISCOVERY ZONE

Bombay Hook National Wildlife Refuge, <http://www.fws.gov/northeast/bombayhook/>, managed by the U.S. Fish and Wildlife Service, was established in 1937 and today is comprised of 16,251 acres of wildlife habitat. The Refuge's purpose is to provide safe breeding, feeding and resting areas for migratory birds and other wildlife. The Civilian Conservation Corps worked on the Refuge from 1938 to 1942. During that time the roads, dike system and impoundments were started. Today, there is a 12-mile loop wildlife drive that traverses a variety of habitats including fresh and salt marshes, ponds, mudflats, woodlands, and upland fields. The Refuge is known for wildlife observation especially bird watching, wildlife photography, hunting, environmental education and interpretation programs, and the historic 1753 Allee House.



Birding along the impoundment at one of the driving tour spots

Visitors to Bombay Hook have the opportunity to participate in wildlife-dependent recreational opportunities such as: bird watching, wildlife observation and photography, environmental education and interpretive programs, and waterfowl, deer, and small game hunting. Visitors may participate in programs about wildlife, habitat, the importance of wildlife conservation, and the Refuge System. Quiet dominates the refuge where visitors may connect with nature.



Boardwalk Trail at Bombay Hook

Byway Related Opportunities

Over 13,000 acres of the refuge is tidal salt marsh comprised of cordgrass meadows, mud flats, tidal pools, rivers, creeks and tidal streams. The remaining refuge consists of freshwater impoundments, brushy and timbered swamps, forests and upland fields of herbaceous plants. Located along the Atlantic Flyway and the Delaware Birding Trail, the refuge annually attracts over 150,000 migrating ducks and geese, shorebirds and song birds. Other wildlife found here includes deer, red fox, beaver and many species of turtles, nonvenomous snakes, frogs, and salamanders. Around 115,000 visitors annually take the 12-mile auto tour route, participate in the wide range of environmental education and interpretation programs and actively engage in birding, hunting, wildlife observation and photography.

Bombay Hook National Wildlife Refuge is well-equipped and ready for visitors today. It is open to the public from sunrise to sunset offering the following:

- **Visitor Center** – The Visitor Center is open all year on weekdays and spring and fall weekends. It is accessible to visitors with disabilities. A gift shop is operated by the Friends of Bombay Hook, Inc. Proceeds from the gift shop are used to support environmental education programs and other refuge needs, such as habitat restoration, and wildlife studies.
- **Allee-House Restoration** – Completion and opening of the Allee House will offer a historic cultural dimension to the current wildlife dependent recreational opportunities.
- **Programming** – Self-guided exhibits, seasonal walks, presentations and workshops are augmented by informational brochures on birds, amphibians and reptiles, mammals and self-guided tours for trails and auto tour.
- **Website** – An informative website with a calendar of events that highlights the changes to the natural community each month offer the visitor useful information about the resources found at the refuge.
- **Accessibility** – An auto tour, observation towers and nature trails offer the visitor opportunities to experience the wonders of this refuge. Boardwalk and Bear Swamp Trails provide accessibility for people with disabilities. Information about the wildlife drive, five walking trails, observation towers, and current programs is available at the Visitor Center. Visitors can view the latest bird sightings, watch a video about the Refuge System and Bombay Hook, review exhibits, borrow binoculars and buy a field guide or other items at the Friends of Bombay Hook's Refuge Store.
- **Educational Programs** – Bombay Hook offers educational programs for grades one through twelve, enabling students to learn about the Refuge's diverse habitats. Conservation partners and universities use the refuge for hands on field study.

Byway Related Challenges

- **Funding and Partnerships:** Appropriate funding and enhancing partnerships with the DNREC, DELDOT, Delaware Tourism Office, and other local and state entities are necessary to achieve success in telling the story of the Bombay Hook Discovery Zone. It is also important in enhancing/restoring facilities and programs that will attract residents and visitors. Collaboration among the Delaware wildlife areas and education centers is effective in developing comprehensive and complementary environmental education programs and new visitor services facilities including a Byway Visitor Center.



Boarding a tour boat down the Leipsic River

- **Climate Change:** Climate change, associated with increasing global temperatures, is affecting land, water, and wildlife resources. Along the U.S. Atlantic coast, rising sea levels have begun to affect fish and wildlife habitats including those used by waterfowl. Bombay Hook NWR, which is less than ten feet above sea level, is experiencing interior marsh loss at a rate of approximately 58 acres per year.

Management Strategies and Recommendations

At the time of completing this Corridor Management Plan, the Comprehensive Conservation Plan process for Bombay Hook has been started. The Planning Advisory Committee and future Management Entity should continue to collaborate with the U.S. Fish and Wildlife Service to integrate the CMP principles and goals into the recommendations of their plan. It will be important during the annual CMP review, to consider implementing actions outlined in the Comprehensive Conservation Plan for Bombay Hook that support and help to promote and preserve the Delaware Bayshore and Byway.

3.11 LEIPSIC DISCOVERY ZONE

This Discovery Zone is centered on the Town of Leipsic, a historically significant fishing village, where residents continue today to make a living as watermen. Leipsic is the Bayshore's only deep water port. At the midpoint of the byway, Leipsic has the potential to become an ideal place to get out of the car, and explore the history and culture of this byway community.

Leipsic was known during the 18th Century as "Fast Landing" because of its quick boat docking on the 300-acre tract from William Penn. With its port access, Leipsic had significant economic potential and by the early 19th Century, grain, lumber and fur were being shipped into the region. In reference to the world-celebrated fur trading status of Leipzig, Germany, the area was renamed Leipsic. "J. Thomas



Getting ready for a day of fishing in Leipsic

Scharf's *History of Delaware* (1988) characterizes Leipsic's port in 1836 as "one of the most important on the Peninsula," with "hives of activity" that included lumber, grains, oysters, and fur that could be loaded onto 24 ships at one time. From the 1830's to 1850's there were multiple shipyards in operation, building vessels that traveled all over the Atlantic Ocean. A steamboat line opened in 1853 connecting Smyrna, Leipsic, and Philadelphia." (Commission, 2006)

Evidence of this waterman's village can still be experienced today by foot, car or boat. Watermen dock their boats at Sambo's Tavern and other spots along the river. A boat ride down the Leipsic River, occasionally sponsored by Bombay Hook Wildlife Refuge, offers an entrée to the wonders of the Bayshore ecology past the Town of Leipsic, hunting blinds, and the vast marshland. On the way to the

Bay, the river crosses into Bombay Hook National Wildlife Refuge where shorebirds, hawks and other birds can be found.

The residents of Leipsic have every reason to be very proud of their history. It is the last of the Route 9 communities of watermen still active within the Delaware Bayshore. This Discovery Zone has a well-known crab restaurant, Sambo’s Tavern and a deli, but few other traveler services.

Byway Related Opportunities

- **Additional traveler services** – an opportunity to encourage new businesses in Leipsic for travelers to Bombay Hook National Wildlife Refuge, among other byway attractions. Leipsic is conveniently located to provide needed restaurants, lodging and other visitor amenities as demand warrants.
- **Proposed Maritime and Agriculture Museum** – The Town is pursuing an interpretive and educational museum that would serve travelers.
- **Boating** – Marine activities including boat slips, boat ramps and a pier attract boaters from as far away as Philadelphia. Convenient access to the Leipsic River presents an opportunity for private boat tours and fishing excursions to the extent that the activities of the commercial fishing and crabbing industries are not adversely affected by tourists. A ride down the River to the Bay provides access to and through the marshland of Bombay Hook National Wildlife Refuge. Augmenting a simple boat ride with knowledgeable guides can enhance the traveler experience through interpretation about the Bayshore landscape and wildlife.

Byway Related Challenges

- **Achieving balance between the needs of the Watermen and the visitor.** The challenge is to balance the needs of this historic watermen industry and insure its preservation and economic viability with the town and its natural setting. Town leaders believe that the balance lies in the provision of visitor services centered by a museum. The museum would highlight the

Annual Horseshoe Crab Rescue and Blessings

For the past five years, Buddhists gathered on Pickering Beach to conduct a Horseshoe Crab Rescue and Blessing Dharma Assembly. Every year hundreds of thousands of horseshoe crabs die from being stranded up-side-down on the beaches of the Delaware Bay and along the Atlantic coast from Maine to Florida as they come ashore to spawn, unable to return to their marine habitat. This ceremony, led by Rinpoche’s from the Dharmadhatu Center of Delaware and the Tathagata Dharma Association of Maryland, together with Buddhists from five states, bless these animals, while those attending the ceremony help enable the stranded ones to return to the sea.





maritime and agricultural history, and hunting and trapping traditions of the waterman. The Town believes that the DuPont Schoolhouse would be an ideal location for the museum and could include visitor amenities. The museum would also become an asset as the town seeks to encourage new businesses, particularly restaurants and food services. With the neighboring farming community and fresh seafood in abundance, the appropriate resources are in place. The challenge is developing the market through a combination of public and private sector investments.

- **Provision of Visitor Services.** Public restroom facilities for recreational users of nearby state and national wildlife areas are needed in this Discovery Zone.

Byway Related Program Strategies and Recommendations

1. **Implement the Maritime and Agricultural Museum:** The museum will become a focal point for learning about the waterman and their way of life. The Town plans to highlight hunting and trapping traditions centered in the surrounding marshlands as well as the history of the DuPont schoolhouse.
2. **Encourage guided boat tours:** Capitalize on the size and access to the Leipsic River to attract private boat tours and fishing excursions. Address any impediments and work with state agencies to create incentives for recreational boating and interpretive tours. The tours must respect the needs of the fishing industry including maintenance of their watercraft and the transfer of their bounty to land. Consider training watermen as natural history educators and licensing their boats for tours and excursions.

"Pickering Beach Road leading into the town of Pickering Beach offers fantastic views of the salt marsh, and is a great place to scan the marsh for multiple short-eared owls, northern harriers and other raptors in the winter. Amazing up-close views of these birds at sunset over the marsh is a sight not to be missed."

*Karen Bennett,
Delaware Bayshore Initiative Coordinator and an avid birder.*

3.12 LITTLE CREEK DISCOVERY ZONE

The Little Creek Discovery Zone features the Little Creek Wildlife Area. Close-by Pickering Beach is a designated sanctuary for horseshoe crabs. The horseshoe crab is designated as the state marine animal, a significant species of the Delaware Estuary. The Town of Little Creek is a charming Bayshore town with an interesting history while offering the potential for traveler services.

The Town of Little Creek, settled in the early 1800's, allegedly was first inhabited by pirates. Originally called Little Landing, the town was most prosperous in the late 1800's when a thriving oyster industry emerged. Nearby Port Mahon grew into a stopover for large ships and commercial boats that led to businesses, such as bait shops, restaurants and a cannery in town. The Old Stone Tavern, actually never a tavern, was built with the stone from the ballast of old sailing ships. Today, few boats are found in the Town's waters. Now, part of the Little Creek Wildlife Area, Port Mahon was previously lined with fishing shacks and oyster-shucking houses.



Pickering Beach: The nearby coastal village of Pickering Beach is an official sanctuary of the horseshoe crab. Visitors come to witness the spectacular seasonal convergence of horseshoe crabs, and migratory birds. A dramatic increase in harvest of horseshoe crabs for eel and “conch” (also known as whelk) bait as well as for medicinal purposes has led to concern over the supply of horseshoe crab eggs. The eggs are essential food for shorebirds during their spring migration. Red Knots, Ruddy Turnstone, Semipalmated Sandpiper and Sanderlings fuel up on the eggs before migrating north to Arctic nesting grounds. Without sufficient food, shorebird populations will be at risk. Pickering Beach Road, leading into the town of Pickering Beach, offers fantastic views of the

Pickering Beach is a horseshoe crab sanctuary and as a result is subject to the following regulations:

3209 Horseshoe Crab Sanctuaries

(Penalty Section 7 Del.C. §2705(b))

1.0 All state and federal lands owned in fee simple are horseshoe crab sanctuaries during the period beginning 12:01 a.m. on May 1 through midnight June 30.

2.0 Any land owner(s) may register their land with the Department to be designated as a horseshoe crab sanctuary for a period to be specified by the land owner(s).

3.0 It shall be unlawful to collect any horseshoe crabs at any time from a horseshoe crab sanctuary except as provided in Regulation 3203 section 2.0.



Port Mahon Road along the bay could be a place to understand the impact of sea level rise. Note: This photo was taken prior to Super-storm Sandy.

salt marsh, and is a great place to scan the marsh for multiple short-eared owls, northern harriers and other wintering raptors in the winter.

Little Creek Wildlife Area: More than 4,700 acres comprise this wildlife area managed by DNREC’s Division of Fish and Wildlife. The area offers hunting opportunities, and due to its extensive coastal wetland impoundments that are habitat for waterfowl, shorebirds, herons, egrets, bitterns, rails, gulls and terns, the site is on the Delaware Birding Trail. Screech owls are frequently seen roosting in wood duck nesting boxes. A short boardwalk trail to an observation tower provides fantastic views of the wildlife area’s south impoundment and Pickering Beach. Summer is a great time to scan the marsh vegetation for bitterns, egrets and herons. Birding and wildlife watching are good trail related activities as roadways and trails offer spectacular viewing opportunities through the wildlife areas. There is also an entrance road off of Pickering Beach Road to the south impoundment of the wildlife area, offering wildlife viewing. The levees around the impoundments offer peaceful walks.



Port Mahon: The road, which connects to Route 9, has been ravaged by frequent flooding. DNREC operates a boat ramp at the end of the road on the Mahon River and a fishing pier jutting out into the bay. Both are heavily used by the public. Birders and photographers frequent this area to view shorebirds in the spring because they are easy to see so closely from a car window without disturbing the birds. Providing interpretation of the area's resources and history would improve the visitor experience.

Byway Related Challenges

- There are no signs directing visitors where to go in the wildlife area. Many people start driving down the wildlife area road and think they are entering into a construction yard or otherwise into an area that is not open for the public.
- Because this area is ever-changing, both DNREC and DeIDOT are challenged to be vigilant in maintaining public safety while maintaining the educational and scientific aspects of Port Mahon.

Byway Related Opportunities

There is local interest in this Discovery Zone that generated six key actions:

- Restore the flow of "Little Creek", and construct a small boat ramp and fishing area and seek commercial businesses serving smaller boats;
- Convert the "Old Stone Tavern" into an interpretive center with information about Port Mahon and the Town of Little Creek with restroom facilities and parking;
- Develop a walking trail behind the Old Stone Tavern that skirts the creek and loops back to Main Street via the sidewalk to the Tavern.
- Identify technical and financial assistance for the preservation and maintenance of historic structures;
- Identify strategies to share the cost of traffic-related law enforcement;
- Create rest stops with bathrooms at the hunter check-in station south of the Town of Little Creek.

The Ecological Research & Development Group (ERDG), founded in 1995, is a 501(c) 3 non-profit wildlife conservation organization whose primary focus is the conservation of the world's four remaining horseshoe crab species. Seven Delaware Bayshore communities participate in a program called Backyard Stewardship® which encourages coastal communities to declare their shared habitat a horseshoe crab conservation area or sanctuary. Within the Delaware Bayshore, Pickering Beach and Kitts Hummock participate in the program. For more information on this program, see:

<http://www.horseshoecrab.org/misc/erdg.html>



- Little Creek Wildlife Area parking lot – located on Route 9 just north of the entrance, it is generally used as a check-in station for hunters. Gates are otherwise locked and there is no access to trails or other amenities from this parking area. The potential for improved traveler and visitor amenities at this location needs further examination.

Byway Related Program Strategies and Recommendations

1. **Improve Little Creek water access:** Access improvements including a boat put-in near Route 9 and the completion of a sidewalk between Little Creek and the center of town at Wilson Lane will catalyze other traveler based opportunities. An environmental survey is in progress to assess the potential opportunities. Improve signage guiding visitors into and through the wildlife area. Improve welcome / visitor center area providing information on natural and cultural history of the byway and DZ.
2. **Improve the Port Mahon waterfront:** Significant erosion continues to put this area under duress due to sea level rise. However, it is one of the few areas along the byway that provide access for large boats. The pier and the boat ramp present major waterfront activity. Develop Port Mahon Road area as a recreation and eco-tourism site.
3. **Establish Guided Tours for Pickering Beach:** Guided tours are recommended during the horseshoe crab spawning season. Shorebird interpretive sign is needed as well. In addition, to welcome the public, Pickering Beach Road should be improved to accommodate busses and a parking facility should be constructed for events at the beach.
4. **Convert the Old Stone Tavern into an Interpretative Center:** The Old Stone Tavern would be an ideal location to understand how life has evolved along the Bayshore and the role nature has played. The Town should work with DNREC to achieve this goal.
5. **Traffic Law Enforcement in Little Creek:** The Town needs assistance in addressing a speeding problem that continues even in the face of enforcement. DeIDOT and the State Police should convene a study to develop a plan to address the problem. Solutions from stepped up enforcement to traffic calming should be investigated.
6. **Branding and Positioning:** Package Pickering Beach and its internationally recognized horseshoe crab spawning beaches and shorebird foraging grounds as part of the Little Creek experience.



Kingston-upon-Hull House: *The house at the Ted Harvey Conservation Area belonged to John Briggs and Mary Phillips according to a 1677 survey. The survey also indicates a house standing on or near the site occupied by the present brick house. A patent in 1678 to Briggs and Phillips says their land adjoins the Town Point property. John Briggs was known for the petition he signed for the creation of St. Jones County. In 1680 he was responsible for taking its first census. He also was a member of the first assembly under Penn's government where he served from 1682-1685. In 1684 he was commissioned as a justice of the peace as well as the sheriff for Kent County. It is believed that the house at Kingston was perhaps the first Kent County courthouse since it is known that the County Court met at Town Point in 1680. However, later records indicate that Kingston-upon-Hull was not the site of the first county courthouse meeting. These records show the meeting took place at Town Point, the residence of Edward Pack who owned the tract jointly with Briggs. Pack was appointed as justice of the peace in 1680.*

3.13 ST. JONES NECK DISCOVERY ZONE

The St. Jones Neck Discovery Zone – the southern gateway to the Byway – is the site of one of the state's earliest English settlements. Plantations began to establish along the St. Jones River in the early 1660's. This early development is a testament to the importance of the St. Jones River. Today, the beauty of the agricultural lands surrounding the wildlife areas offers history, heritage and natural resource exploration opportunities.

A good place to start in the Discovery Zone is at the Visitor Center at the John Dickinson Plantation where area history is explored. From here, a visitor can venture into the natural areas of the St. Jones Reserve and Ted Harvey Conservation Area.

The strong link of history and cultural traditions to the natural landscape is the hallmark of this Discovery Zone. It is part of the great outdoors, a place for birding, fishing, hiking, and hunting. The working agricultural landscape and the globally-significant horseshoe crabs and shorebirds spectacle add to the area's wonder and resources.

The Discovery Zone is defined by the natural landscape of salt marshes, bay beaches, and the St. Jones River. The cultural landscape of the working farms, the historic John Dickinson Plantation and evidence of colonization dating to the 1660's, offers much to the Byway traveler. Getting the byway traveler to experience these diverse assets is both an opportunity and a challenge. Historic markers note the locations of Byfield, the boyhood home of Caesar Rodney, one of the signers of the Declaration of Independence, Hangar 1301 at Air Mobility Museum, the home of John Dickinson, and the bay-front community of Kitts Hummock.

Byway Related Opportunities

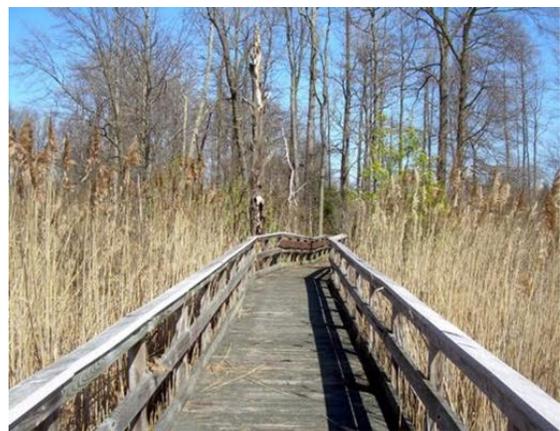
- **John Dickinson Plantation**
<http://history.delaware.gov/>– Home of John Dickinson, signer of the United States Constitution and “Penman of the Revolution”. This historic plantation on Jones Neck, which the family called Poplar Hall, takes you back to 18th Century America. The Visitor Center offers an orientation video, exhibits and historic interpreters about John Dickinson – the man, family, farmer, slave holder and politician as well as many programs and events.
- **St. Jones River** – The St. Jones River, which has its headwaters in the western part of the county, begins about 22 miles upstream from the Delaware Bay. Significant ponds in the watershed are Silver Lake, Moores Lake, and Wyoming Lake. Flat wetlands, usually forested, exist mostly in the upper portion of the watershed. Tidal wetlands line the banks of the river as it nears the Bay. The River offers great bird sightings, wildlife habitats, stunning marsh lands and a rich history. Access to St. Jones River for canoe, kayak, and other boats is located at Scotton Landing just west of the Route 1 Bridge over the river.
- **St. Jones Reserve** <http://de.gov/dnerr> - Located along the St. Jones River, the 5,119 acre Reserve is a part of the Delaware National Estuarine Research Reserve. It is open to the public year round and provides hiking trails (including a boardwalk linking to Ted Harvey Conservation Area), green construction and conservation demonstrations, a native plant nursery for restoration projects as well as a Visitor Center with hands-on interactive activities and interpretive exhibits, research laboratory, offices and meeting space. The Reserve supports ongoing research and monitoring as well as a number of programs for the community and visitors year round including:



Entrance to the Home of John Dickinson Plantation



St. Jones River



Boardwalk at St. Jones Reserve



- Community Education offers free public programs to generate meaningful experiences for all kinds of people interested in learning about, protecting and restoring our coast and Bayshore. They include boat and canoe trips, coastal heritage tours, workshops, seminars, citizen science projects, festivals and habitat hikes.
- School Programs offer site based and outreach environmental educational programs for grades K-16. The Reserve Curriculum provides students with an opportunity to understand ecosystem functions through the exploration of an estuary.
- Teacher Professional Development opportunities through various programs including Green Eggs & Sand, Estuaries 101, and Project WET (Water Education for Teachers).
- The Thank You Delaware Bay Campaign is an outreach campaign developed to showcase the Delaware Bay and to encourage actions and activities that will help protect the bay's health and resources. The Delaware Bay takes care of us. Let's return the favor.
<http://www.tydb.org>
- **Ted Harvey Conservation Area** – Over 2,700 acres, this conservation area is named after the founder of Delaware Wild Lands, a conservation organization which purchased the property in 1967. Logan Lane Tract is on the Delaware Birding Trail offering three principal areas for birders including the north impoundment, Bayshore, and south impoundment, which have limited access during the hunting season.
- **Kitts Hummock** – Like the Native Americans before them, European settlers used this rising ground or “hummock” on the shore of the Delaware Bay as a place for fishing and recreation. In 1738, Jehu Curtis received a patent for lands that he called “Kitts Hammock.” By the early 1800s, the Pleasanton family had established a tavern here for the entertainment of visitors. Around 1846, a hotel was built nearby. Known for a time as the Bay View Hotel, it was long the center of local activities. In the latter decades of the 19th century, a number of small cottages were erected here. Many were owned by residents of Dover who left the sweltering heat of summer behind for the cooling effects of the waters and bay breezes. Kitts Hummock continues to provide a serene refuge for residents and visitors alike. It is the perfect location to see horseshoe crabs, shore birds or just listen to the waves gently undulate. This peaceful Bay Beach provides shallow waters, un-crowded access, beautiful habitat and safe family recreation. Kitts Hummock Beach is a registered Horseshoe Crab Sanctuary and has public beach access, public parking and special events throughout the year. For more information, visit their website: www.kittshummockbeach.com.
- **Air Mobility Command Museum** – This museum is part of the National Museum of the United States Air Force's field museum system. The Air Mobility Command is a major command of the United States Air Force. Its mission is to deliver maximum war-fighting and humanitarian efforts for America through rapid and precise global air mobility. The museum is ADA accessible and guided tours available. It is kid-friendly with free flight simulators, a junior pilot's plane, school





Delaware's Bayshore Byway

CHAPTER 3 – INTRODUCING DELAWARE'S BAYSHORE INITIATIVE AND THE BYWAY'S DISCOVERY ZONES

tours and a research library. In addition to the exhibits and planes, public programs include special events. For more information, visit their website: <http://amcmuseum.org>

Byway Program Strategies and Recommendations

1. **Expand upon and improve trails:** Expand the trails connecting the John Dickinson Plantation, St. Jones Reserve and Ted Harvey Conservation Area. Kitts Hummock plans to expand its network of pedestrian, biking, and running trails.
2. **Planned improvements to the Ted Harvey Conservation Area** – Two observation platforms will be added to the North and South Impoundments with interpretative signs to enhance the visitor experience at this byway attraction.
3. **Develop Informational and Interpretive Materials:** Trail Guides, signs, maps and interpretation of this Discovery Zone themes and attractions can improve the quality of the traveler experience.
4. **St Jones Reserve visitor center exhibits:** Exhibit area contains a wealth of exhibits and should be updated to reflect the Byway.
5. **Improve rest facilities:** Ted Harvey Conservation Area and Kitts Hummock are lacking in rest facilities for visitors. Undertake a study to master plan outdoor opportunities as well as traveler amenities and services.
6. **Improve parking and traffic control at Kitts Hummock:** During the peak season, study solutions for handling people and cars that provide for adequate access while protecting the assets of this area.
7. **Kingston-upon-Hull House:** Develop a plan to stabilize and restore the Kingston-upon-Hull House and install interpretative signing.

CHAPTER

4

EXAMINING THE CORRIDOR CONTEXT



4.0 INTRODUCTION

This chapter summarizes the existing conditions along the Byway corridor from numerous documents, and the policies and guidance that support, hinder or have the potential to impact the management of the Byway's intrinsic qualities and corridor characteristics. It highlights the opportunities and constraints that will guide the development of management strategies and an action plan for the Byway corridor. In seeking out strategies to retain the qualities of the Byway corridor, this assessment of existing conditions will help identify and define infrastructure improvements, management policies, tourism and education strategies and actions designed to preserve and enhance the Byway.

The Byway Corridor is dominated by a coastal landscape of tidal marshes, shoals, and creeks leading to the Delaware River and Bay, and characterized as mostly rural with farmland predominantly in the southern section of the byway. Industrial land dominates the northern landscape between the City of New Castle and the C&D Canal. Small coastal communities are found along the corridor offering a glimpse of life along the water. A significant portion of the land along the Byway Corridor is in public ownership with some suburban development interspersed near the larger urban areas at the northern end of the Byway corridor, and to the east of Middletown.

"Route 9 is a forgiving road - but watch out for water on the roadway. And where else can you go around a corner and nearly run into a 20-pound snapping turtle?"

*Harry Pressell
Former Bartender, Augustine Inn*

4.1 BAYSHORE INITIATIVE

Forty-one years ago, Governor Russell Peterson signed into law the Coastal Zone Act. This landmark legislation set the stage to preserve the Delaware Bayshore in perpetuity. Since the act was signed into law, more than 50% of the acreage east of Route 1 from Pea Patch Island to Lewes has been preserved. The Byway is located in the northern half of this area. The Bayshore is a world-class birding area. In DNREC's Bayshore Initiative there are a number of goals, each of which informs this Corridor Management Plan (CMP). They are highlighted below:



Abundant wildlife can be found along Delaware's Bayshore.

- Conservation and Restoration
 - *Land/Waterway Conservation:* Expand landscape-level conservation, farmland preservation, and habitat connectivity through voluntary acquisition/easement of unprotected lands.

- *Ecological Restoration*: Enhance critical native habitat and restore waterways to protect/promote species diversity, reduce flooding, improve water quality, and adapt to climate impacts.
- *Resource Protection*: Coordinate enforcement of existing regulations that prohibit trespass, vandalism, poaching, and disturbance to wildlife and habitats.
- Recreation and Connectivity
 - *Connectivity with Local Communities/Waterways*: Focus strategic infrastructure investments to connect wildlife areas to urban centers by enhancing Route 9, the C&D Canal Trail, local hiking trails, and navigable waterways.
 - *Safe and Healthy Recreational Experiences*: Promote low impact recreation activities and improve water quality to increase fish and shellfish populations; protect swimmers, seafood consumers and other users; and maximize enjoyment of outdoor experiences.
 - *Access Enhancements*: Ensure safe, aesthetically pleasing and more rewarding wildlife viewing, photography and other recreation opportunities in both urban and rural areas.
- Engagement and Marketing
 - *Visitor Engagement/No Child Left Inside*: Focus educational programming, interpretation and recreational efforts on inspiring the next generation of environmental stewards.
 - *Marketing*: Coordinate with local communities, tourism offices, local business and residents to aggressively promote the area regionally, nationally and internationally.
 - *Volunteerism Promotion*: Engage local residents, community groups, service organizations, schools and business to instill a sense of ownership and stewardship.



Views along the Route 9 Byway illustrate varying road conditions and landscapes.

4.2 INSTITUTIONAL SURVEY OF THE BYWAY

An important part of preparing a Corridor Management Plan is examining the various plans, policies and programs that have already been implemented by state, county and local governments. An inventory of selected planning-related policy documents, ordinances and data compiled and reviewed for the purposes of this CMP is included in the Appendix. The local municipalities and the counties have in place guidance that addresses land use, economic development, natural resource protection and historic preservation, most of which are compatible with the Byway vision and goals. However, additional sensitivity to the unique characteristics of the corridor in public decision-making could advance the quality of new development and improvements to enhance the byway's environmental and historic context.

The Fort DuPont Master Plan, currently underway will consider land uses that take into account the eco-tourism focus of this byway corridor to potentially encourage visitor amenities and services. The Fort DuPont Master Plan is being developed in parallel with this Corridor Management Plan. Chapter 4 of New Castle County's Comprehensive Plan in its recognition of the Byway with these words, "Continue to support the preservation of natural, cultural, recreational and historical resources through the State Scenic and Historic Highway Program", will further influence the Fort DuPont Master Plan, tying it to the goals and objectives of Delaware's Bayshore Byway.

Significant guidance is already in place for preserving and managing the resources within the extensive state and federal public lands along the corridor. Some properties, such as Bombay Hook National Wildlife Refuge, have many valuable resources in place, although a new management plan is currently underway to define future actions to improve this public asset. Others, such as Cedar Swamp Wildlife Area, could be further developed to improve management strategies for its protection and public-access opportunities.

In consideration and development of management strategies for the byway, the following policies, plans, programs, regulations were examined for their alignment and capability to support or challenge meeting the byway vision and goals. A more comprehensive summary of the institutional survey can be found in the Appendix. This analysis identifies what is already in place today, and the ability of them to address CMP requirements, such as compatible land use, multi-modal transportation and safe travel, protection of the byway intrinsic qualities, and traveler amenities and services. Ultimately, the CMP along with other policies, plans, programs and regulations will allow local stakeholders to realize the byway vision and meet the byway goals. Essentially, the combination of local, regional and state efforts and organizational endeavors provide a toolkit from which the CMP builds upon

Generally, the toolkit is organized around the following factors:

- Natural Resources and Environmental Considerations
- Land Use and Historic Preservation
- Transportation and Safety
- Community Qualities and Economic Potential

4.3 CORRIDOR TOOLKIT

4.3.1 NATURAL RESOURCES AND THE ENVIRONMENT

There are extensive tools in place to potentially assure the future byway character and protection of natural resources while providing for public access, use and enjoyment of them. Below is a summary of documents that guide the Byway Corridor’s public lands and the natural environment.

Delaware Sea Level Rise Adaptation Plan

There are two parts to the State of Delaware’s planning process to adapt to Sea Level Rise. The first is the Vulnerability Assessment and the second is the Adaptation Plan. They are briefly described below.

Sea Level Rise Vulnerability Assessment for the State of Delaware¹ -- Results of the Sea Level Rise (SLR) Vulnerability Assessment clearly demonstrates the impact on the Bayshore Corridor from sea level rise inundation. “Within those potentially inundated areas lie transportation and port infrastructure, historic fishing villages, resort towns, agricultural fields, wastewater treatment facilities and vast stretches of wetlands and wildlife habitat of hemispheric importance. “ The Vulnerability Assessment provides valuable data on the potential impact to Delaware resources. Of the sixteen resources of concern, which emerged in the study, the following are important to the future management of the Byway and Bayshore:

- Beaches and dunes
- Coastal impoundments
- Dams, dikes and levees
- Evacuation routes
- Freshwater tidal wetlands
- Future development areas
- Habitats of conservation concern
- Heavy industrial areas
- Roads and bridges
- Tidal wetlands
- Tourism and coastal recreation
- U.S. Fish and Wildlife Refuge



The quieter, wilder side of the Delaware Bayshore

Sea Level Rise Adaptation Plan -- Due to the byway’s location on the eastern shoreline of Delaware, this Adaptation Plan, scheduled for completion in Fall 2013 is a critical management tool for the communities and lands within the byway corridor. The plan will provide information about adaptation strategies and will recommend actions for the state to take to build its “adaptive capacity” including recommendations for coordination, filling data gaps, regulatory changes, technical assistance and education. It will serve as a roadmap for implementing actions that will improve Delaware’s ability to

¹ A Progress Report of the Delaware Sea Level Rise Advisory Committee (November 2011)

prepare and respond to the challenges of SLR. The Sea Level Rise Advisory Committee will ensure that the Adaptation Plan reflects potential solutions to reduce risk to sea level rise impacts.

The following list of Options for Preparing Delaware for Sea Level Rise was developed by Delaware's Sea Level Rise Advisory Committee for potential inclusion into the State's Sea Level Rise Adaptation Plan. The options below were the result of an October 2012 workshop, discussions with subject matter experts and deliberation by the Advisory Committee. The options target the 16 vulnerable resources that were considered a high or moderate concern in the 2012 Sea Level Rise Vulnerability Assessment for the State of Delaware.

- Improve Communication and Coordination between State, Federal, Local and Regional Partners to Streamline Sea Level Rise Adaptation Efforts.
- Provide Increased Regulatory Flexibility for Adaptation and Improve Consistency between Regulatory Agency Decisions.
- Provide Consistent and Predictable Policies for Future Growth, Investment, and Natural Resource Management.
- Increase Public Awareness of Sea Level Rise through Education, Outreach and Marketing.
- Improve the Availability & Robustness of Sea Level Rise Data Sets.
- Provide Technical Assistance to Partners for Assessing Vulnerability and Choosing Adaption Strategies.

Delaware Coastal Programs Sea Level Rise Initiative -- To help assess, prepare for and minimize the potential impacts of SLR, the Delaware Coastal Programs Section of DNREC is leading a multi-year Sea Level Rise Initiative. Its goal is to reduce Delaware's future vulnerability to the effects of sea level rise by:

- Providing scientific and technical support for decision-making;
- Implementing on-the-ground project in partnership with stakeholders;
- Providing educational and outreach opportunities for stakeholders and the public; and
- Improving existing policies and management practices and/or developing new policies and management practices where necessary.

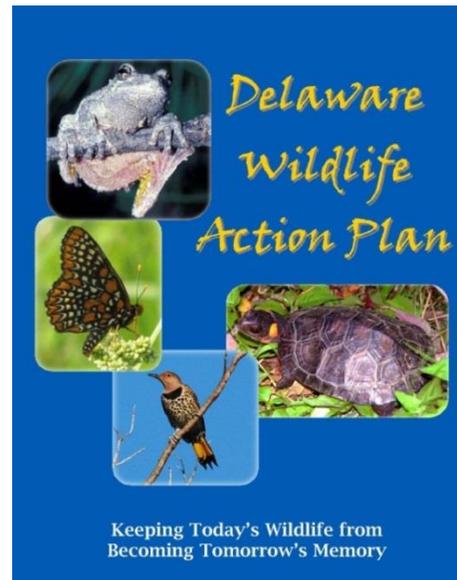
As part of the goal of providing scientific and technical support for decision-making, Delaware Coastal Programs scientists have partnered with the National Wildlife Refuge System, the University of Delaware, local Estuary Programs and other state agencies to fill gaps in knowledge about coastal storms, tide levels and marsh sediment accretion. This data and information will be used for policy development and communication of this new information is a component of the ongoing outreach strategy by DNREC.

Delaware Wildlife Action Plan (Olin Allen, 2006)

This plan is currently undergoing a required review and revision process that will be completed by October 2015. In the current Action Plan, wildlife and habitat conservation issues and actions provide guidance on strategies that DNREC and its partners can take. One important implementation strategy is the development of detailed, site-based conservation plans for ecologically distinct portions of the Green Infrastructure Natural Resources Focus Areas. Doing so will further develop recommendations to protect wildlife and plant species in important habitat corridors, some of which are located along the Byway.

The goal of this Action Plan is to provide strategic direction, and an information and logistical framework, for conserving Delaware's native wildlife and habitats as vital components of the state's natural resources. It is based on the following principles:

- Conservation of Species vs. Habitats – Emphasize the management of ecological structure and function of key habitats over management of individual species
- Management on Conservation Lands – Direct management in state wildlife areas, parks and forests in the Green Infrastructure Natural Resources Focus Area, which are areas, defined using criteria and mapping to identify an interconnected network of forest, upland and wetland habitat for a variety of species.
- Management on Private Lands – Direct private lands management toward buffering and connecting conservation lands in the Green Infrastructure Natural Resource Focus Area.
- Measuring Success – Establish performance indicators to measure the success of conservation actions and plan implementation by conducting inventories, research and monitoring of species, habitats and the impacts of conservation to guide adaptive management.
- Partnership Development – Strengthen partnerships among conservation agencies and organizations to link landscapes, tie together complementary efforts, and leverage investments.
- Data Collection and Information Management – Collect, manage and analyze data to support wildlife diversity conservation efforts with sound science.
- Education, Outreach and Enforcement – Increase public knowledge of wildlife conservation issues to develop an understanding of habitats, species, and conservation issues and actions; foster a sense of responsibility for personal choices; actively engage citizens in conserving natural resources; and otherwise cultivate support for wildlife diversity conservation. Enforce regulations to promote responsible behavior in interactions with wildlife.



Kent County's Comprehensive Plan (2007), Green Infrastructure Plan

This Plan is aligned with the DNREC'S efforts to protect wildlife and plants in a conservation framework. This Green Infrastructure Plan includes a strategy to utilize the Wildlife Action Plan, Green Infrastructure, and Source Water Protection maps produced by DNREC in conjunction with Land Evaluation Site Assessment (LESA) scores in ranking properties for County agricultural land preservation funding. This effort can advance the preservation of the byway's rural landscape in the County. Kent County also incorporated a modeling effort, Delaware Ecological Network (DEN), which was published in a peer-reviewed journal in 2007 and referenced in their comprehensive plan. DNREC is currently updating this DEN model with The Conservation Fund as part of the update to the Delaware Wildlife Action Plan.

“If the County’s goal is to enable the creation of communities, the effort cannot be considered complete without also integrating natural resources in the design.”

Kent County
Comprehensive Plan

US Fish and Wildlife Service Delaware Bay Estuary Project

The Delaware Bay Estuary Project is part of the U.S. Fish & Wildlife Service's National Coastal Program. The Coastal Program focuses the U.S. Fish and Wildlife Service's efforts in bays, estuaries and watersheds around the U.S. coastline. The purpose of the Coastal Program is to work together with our partners to conserve fish and wildlife and their habitats.

Partnership for the Delaware Estuary

The Partnership for the Delaware Estuary is a nonprofit organization established in 1996 to take a leadership role in protecting and enhancing the Delaware Estuary, where fresh water from the Delaware River mixes with salt water from the Atlantic Ocean. It is one of 28 congressionally designated National Estuary Programs throughout the coastal United States working to improve the environmental health of the nation's estuaries. <http://www.delawareestuary.org/>.

Coastal Zone Laws and Regulations

Both the **Delaware Coastal Zone Act Program** (1971) and the **Regulations Governing Delaware's Coastal Zone** (1991) put in place a law and regulations to promote improvement of the environment while providing for existing and new industries to stay competitive. Although this program and its governing regulations reach beyond the byway corridor, it provides guidance for lands along the Byway, prohibiting certain uses and managing others, thus reinforcing the intent to protect this region's natural resources, and promote the area for tourism.

The following documents specifically focus on Byway destinations that contribute to the natural, scenic, and recreational qualities that make this a significantly unique byway:

Blackbird Creek Reserve Ecological Restoration Master Plan (March 2007)

Blackbird Creek Reserve, a major natural resource in the central portion of the byway corridor has public access. It is part of the Delaware National Estuarine Research Reserve, one of 28 National Estuarine Research Reserves across the country protecting over 1.3 million acres of coastal and estuarine habitat for purposes of long-term research, environmental



This image of Blackbird Creek taken from the Blackbird Creek Reserve Ecological Restoration Master Plan illustrates the beauty and importance of this resource.

monitoring, education and stewardship. It is comprised of land held by private landholders protected under the Delaware State Wetlands Act in addition to lands the managed by the Department of Natural Resources and Environmental Control. The acquisition of several parcels in 2003, 2004 and 2005 within the Blackbird Creek Reserve is part of a regional conservation effort that is defined in this Master Plan. This Master Plan also identifies potential restoration initiatives to assure that a coordinated effort is taken to develop a strategy for a site’s ecological restoration needs and priorities.

Bombay Hook National Wildlife Refuge

Bombay Hook National Wildlife Refuge (NWR) is developing a long-term management plan in which the NWR can serve the needs of both wildlife and people. It is important for this significant national resource to maintain, improve and enhance its amenities and resources for the byway traveler.

Delaware Birding Trail

The map and guide to birding sites in Delaware is a joint project by Delaware Audubon, Delmarva Ornithological Society, and DNREC’s Division of Fish & Wildlife. Of the 27 sites throughout the state, nine are located along the Byway. Information about year-round birding in the state provides valuable details on the site, a description of birds that often nest or can be seen at the site, and seasonal considerations. Access and directions to the site and what the sites are described in the map/guide found on the website: <http://www.delawarebirdingtrail.org/>.

Natural Resources Opportunities and Challenges

Review of the existing site conditions, plans, policies and regulations already in place have revealed the following natural resource and environmental opportunities and challenges for the Corridor Management Plan.

OPPORTUNITIES:

- The Bayshore is a world-class birding area, and the Delaware Birding Trail is already in place to encourage eco- and nature- based tourism.
- Extensive plans to protect natural resources by the State and County agencies.
- Regulations to protect Delaware's coastal zone.



Hundreds of thousands of shorebirds can be seen particularly during the migration season along the Delaware's coastal landscape of Delaware's Bayshore Byway.

CHALLENGES:

- Additional human and financial resources are needed to undertake some of the ambitious plans to protect, improve, and provide visitor amenities.
- Public lands could go further in developing or implementing plans to improve the management including protecting resources, addressing flooding, and improving recreational and interpretative facilities.
- Finding opportunities to generate revenue for operations and management of all the public facilities needs to be further explored throughout the Byway Corridor.
- Counties and local municipalities are significant partners in protecting the valuable natural environment in their communities. The development and implementation of green infrastructure systems is critical. Examining the implementation of the Kent County Green Infrastructure Plan could assist in defining its successes, gaps and modifications.
- Although each municipality and county have strong plans and regulations, it is important that decision-making focuses on policies and development that minimizes any negative impact on the Byway resources while identifying opportunities to enhance or improve the Byway experience for future generations.
- While SLR remains a challenge, the state is developing an Adaption Plan to address it.

4.3.2 LAND USE RESOURCES, PLANS AND GUIDANCE

Land development along Delaware's Bayshore Byway is limited to a few areas including undeveloped areas in New Castle, the Governor Bacon complex at Fort DuPont, and a major planned development for some 700 residential units in Port Penn along Port Penn and Pole Bridge Roads between US Route 13 and State Route 9. There are no developments proposed in Kent County, where the Byway corridor is entirely outside of the designated growth area.

There are a number of state, county and local planning policies that encourage the type of growth and development that would retain the rural and natural characteristics of the Byway corridor, and their communities. Decision-makers should rely and refer to the following documents, among others as appropriate, that highlight guidance to meet CMP requirements established by the National and State Scenic Byways Programs for ***a strategy to enhance existing development and accommodate new development while preserving the qualities of the corridor.***

Delaware Strategies for State Policies and Spending (Coordination, 2010) – The purpose of the *Strategies for State Policies and Spending* is to coordinate land-use decision-making with the provision of infrastructure and services in a manner that makes the best use of our natural and fiscal resources. The importance of such coordination lies in the fact that in Delaware land-use decisions are made at the local level, while the bulk of infrastructure (e.g., roads and schools) and services (e.g., emergency services and social services) that support land-use decisions are funded by the state. Thus the development of this document with local governments and citizens helps to create a unified view toward growth and preservation priorities that all levels of government can use to allocate resources.

The *Strategies* are designed to guide the State to use its fiscal resources to enable and encourage the creation of "Complete Communities." A Complete Community has a number of important characteristics. These include: complete streets, which accommodate pedestrians, bicycles and transit in addition to autos; efficient land use that provides a mix of residential, commercial, and industrial activities essential to a healthy economy; healthy and livable attributes, such as trails, parks and access to healthy foods; inclusive and active elements which provide activities, festivals, and programs that enhance social connections and a sense of place; and sustainability which relates to harmony with the natural environment as well as a sustainable economy. Many of these goals can be achieved in the corridor in concert with the recommendations in the plan.



"The tremendous growth in Delaware's farmers' market program helps strengthen the agriculture industry and support local jobs," Governor Jack Markell

The *Strategies* maps identify the bulk of the corridor area as either "Out of Play" or "Investment Level 4." Areas that are considered "Out of Play" are already preserved for agricultural or natural resources purposes, and will not be subject to future development activity. The other rural lands in the corridor

are designated Level 4, which indicate that State investments will support agricultural preservation and natural resource protection. The incorporated communities along the corridor are mostly identified as Investment Level 3, with a few including some Level 2 areas. The *Strategies* support investments that will enhance these communities to bring them more in line with the Complete Community concepts. Many of the low impact ecotourism uses described in this plan are certainly compatible with the goals and policies in the *Strategies*.

Department of Agriculture Land Preservation Foundation is an important effort in the State to protect farmland. More than 100,000 acres of Delaware farmland are permanently preserved by the Department of Agriculture, a milestone that protects a fifth of all agricultural land in the state. In addition, farmers' markets provide a significant economic boost to Delaware agriculture with growth due to the rising interest in locally grown food and healthy eating. There is the potential to increase these markets along the Byway and embrace the agricultural lifestyle of the people who live it.

“To preserve New Castle County as a strong community, where residents can grow up and grow old in a healthy and safe environment, by encouraging environmentally and economically sustainable use of land, which protects the county’s natural, cultural, agricultural, and historic resources.”

Vision Statement, New Castle County Comprehensive Plan

Draft New Castle County 2012 Comprehensive Plan Update – This County update is aligned with the goals and objectives of the byway in several ways as noted below:

- Recognizes the State Scenic and Historic Highways Program (currently the Delaware Byways Program) as a measure to support the preservation of natural, cultural, recreational and historical resources.
 - Work with those involved in byways to identify potential code issues that impede preservation.
 - Enter into partnerships to study and preserve byways.
- Addresses community design including sustainable design standards including:
 - Promote design, which is compatible with the community and its surroundings
 - Create compact mixed-use development opportunities.
 - Promote environmentally and economically sustainable growth.
 - Establish stewardship and preservation of the unique character of the County’s villages and hamlets.

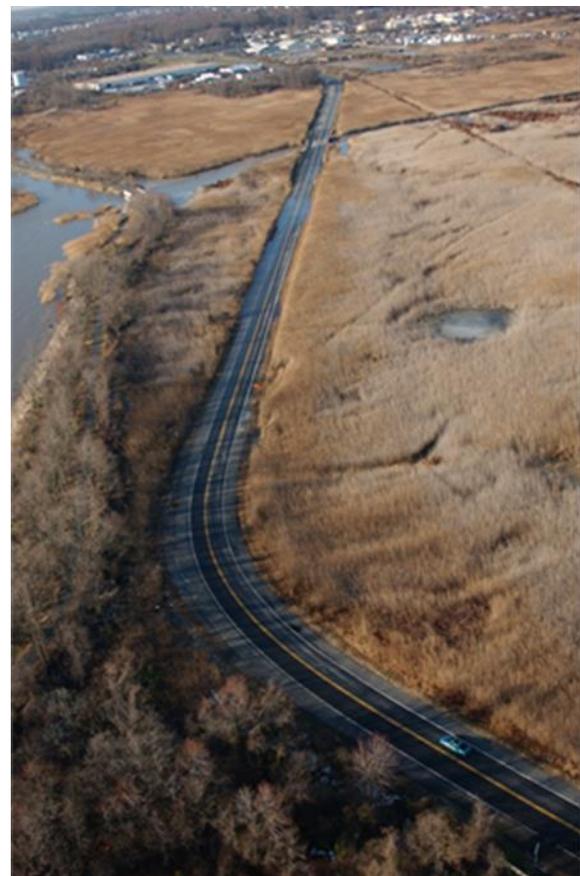
- Establishes new zoning classifications – Small commercial on urban fringe, agriculture preserve, and open space zones can guide place-sensitive development and the protection of open space along the Byway. Because this Plan Update directs future growth to Growth Areas, it reinforces the goals to preserve and protect the valuable natural resources along the Byway.

City of New Castle 2009 Comprehensive Plan – The City supports the burying of utilities in connection with road improvements, which could enhance the street view along the Byway. A number of adopted Zoning Ordinance amendments on land use and design could support historic preservation, conservation-minded retention of natural resources, place-sensitive design, and a mix of uses that encourages a pedestrian-oriented community with walking tours and traveler services. There are also a number of goals and strategies adopted by the City of New Castle that encourage the preservation of this unique historic district and improvements that support visitation by Byway travelers. They include:

- Land Use Goal 1: Continue to encourage mixed residential/retail/office uses. The City is pursuing opportunities to strengthen the downtown ties to the waterfront. This presents an opportunity to examine market options to improve services and amenities for the Byway traveler.
- Land Use Goal 2: Develop New Castle’s remaining undeveloped parcels, brownfields, and redevelopment areas harmoniously with nearby land use; the city is focused on several parcels on Route 9 and Larkin Streets. Future development of these parcels can enhance or detract from the Byway, and consideration should be given to land uses and design guidance that will enhance the visual



This property is directly on the Byway and its future use could contribute to the visual appeal along this section of the route as well as provide byway services or amenities.



This section of Route 9 just south of the City of New Castle hugs the shoreline and in many cases as shown here crosses over numerous water bodies. It is subject to flooding for much of its length.

attractiveness of the area, such as street trees and other landscape improvements, pedestrian and bicycle facilities, location of buildings close to the street with parking in the rear.

- Land Use Goal 3: These recommendations for redevelopment have the potential to enhance the Byway.
 - Develop and adopt long-term redevelopment vision plans for Ferry Cut-off and the 7th and South Streets area. This area is strategically important because it is the northern gateway to the Harriet Tubman Underground Railroad Byway, and the northern end of Delaware's Bayshore Byway. The City and DelDOT are prepared to undertake a Context Sensitive Solutions process to develop a gateway vision and transportation improvements at this site.
 - Seven parcels to the north and south of Dobbinsville are recommended for open space acquisition since it serves as neighborhood open space and a southern gateway for the City of New Castle. A proposed fishing pier and waterfront trailhead are suggested uses for this acquisition and important as providing additional access to the Delaware River and Byway amenities.
 - Another acquisition on the east side of 6th Street, north of downtown is recommended for a waterfront trail extension, another important improvement for the Byway user providing additional access to the Delaware River.

Kent County Comprehensive Plan (2007) – A number of goals that guide the County's future can further enhance the byway including the building of community centers, and the protection of natural resources and the County's rural character. The natural amenities of Kent County are significant components of the high quality of life and support the economy both for the County and the Byway. Plan guidance recommends ensuring that development will be responsive to these natural features, which integrates with an interconnected network of natural areas and green space known as green infrastructure.

The Plan goes further in recognizing that the protection of the rural character is dependent on the ability to encourage and protect agricultural uses.



A typical sprawling subdivision should be avoided in order to retain the rural scenic views along the Byway.

Protection of historic places is an integral component of this Comprehensive Plan and the Byway Corridor Management Plan (CMP).

Most importantly is the guidance to discourage sprawl development. Although the Growth Management Strategy says all the right things, zoning still allows for low-density residential (1 – 4 DU per acre), which could result in a sprawling pattern when development review is not required. The Byway corridor is outside of the Growth Zone Overlay, and the Transfer of Development Rights (TDR) map shows the area as a high-priority sending area, which reinforces a vision for the byway’s rural landscape.

The agricultural industry in Kent County contributes to the scenic beauty and “road less traveled” character of the Byway. A combination of incentive-based strategies and regulatory tools in the County’s Comprehensive Plan support the protection and enhancement of the byway character and the sustainability of the agricultural industry by:

1. Promoting the retention of farms and farmland within Kent County;
2. Seeking to strengthen the agricultural sector of Kent County;
3. Developing regulations that will direct development to areas where infrastructure exists or is planned in order to encourage agriculture and maintain the current quality of life for the residents of the County; and,
4. Seeking to promote and develop less mainstream agricultural uses such as: horse farms, orchards, organic farming, wineries, sod farms and aquaculture.

Areas outside of the Growth Zone Overlay are predominantly agriculture with many properties that have sensitive environmental features such as wetlands, woodlands, and habitat, all crucial to preserving the byway character. In support of this, the County’s primary interest outside the agricultural land and rural infrastructure is to protect environmentally sensitive areas and water quality of the Delaware Bay and Chesapeake Bay Watersheds. One area along the byway where development might occur is the water service area southwest of Leipsic.

The County’s Green Energy Project, centered on wind energy generation and biomass, depending on the location and the siting of these facilities may have not only a visual impact on byway character but an impact on birds and bats so important to the area’s recognition as an important global birding area.

Town of Leipsic Comprehensive Plan (2006) – the plan was prepared to establish a zoning code and map to guide new development for compatibility with the Town culture and its

Community Vision

The Town of Leipsic is a historic, small town with a rich maritime heritage that will maintain its waterman based lifestyle and small town historic character while allowing for modest growth and redevelopment that is consistent with the town’s character and its agricultural and rural surroundings.

Town of Leipsic Comprehensive Plan

resources. Leipsic is located on the Lower Leipsic River, and the landing and quick access to the Delaware Bay was the major reason people settled into this geographic area. A substantial portion of the town is tidal wetlands, which in one way characterizes this community's attractive coastal setting. The town seeks to:

- Preserve its historic homes;
- Retain and expand local business; and
- Seek land uses, such as maritime commercial, parks and recreational facilities, and single-family residential.



Fisherman, crab pots and gear.

The Town's Comprehensive Plan and Vision is in alignment with the CMP Vision and Goals for the byway and its discovery zones including some recommendations, such as:

- Explore opportunities to develop parks and recreational facilities;
- Connect the town to a greenway;
- Community character and design recommendations especially
 - Maintaining a clear edge between the town and countryside
 - Maintaining a walkable community
 - Pursuit of economic development that enhances community character including businesses that supply goods for fishing and agricultural activities
 - Agricultural preservation;
- Maintaining the maritime heritage through a waterfront district design and mix of land uses.

Town of Little Creek Comprehensive Plan (2006) – the plan provides a framework for development and annexation, and to craft the first land development code and zoning map. The Little Creek Wildlife Area is to the east of Town and Little River is one of the Town's valuable assets. "In order to fully utilize this asset, the town has expressed interest in pursuing a project that would provide recreational access to the Little River. Such a project would potentially include a

Community Vision

Little Creek is a historic, small town with a rich maritime heritage that will maintain its small town character while allowing for modest growth and redevelopment that is consistent with its rural surroundings.

Little Creek Comprehensive Plan

walkway leading to a small dock/ramp for launching small boats.” Recommendations in the Comprehensive Plan include one to develop an access plan to Little River and to conduct a feasibility study to improve navigation on the river. These efforts are closely aligned with Delaware’s Bayshore Byway CMP. Others include:

- Promoting place-based restaurants, retail stores, and recreational and maritime businesses;
- Evaluating solutions for Main Street/Route 9 through the Town to address regional traffic;
- Working with the State of Delaware to study access to the Delaware Bay on Port Mahon Road; and
- Community Character Recommendations
 - Preserve the Town’s historic character
 - Encourage compatible design of new development to fit with the town
 - Maintain rural character through agricultural preservation options.

Land Use Opportunities and Challenges

Review of the existing site conditions, plans, policies and regulations already in place have revealed the following land-use opportunities and challenges for the Corridor Management Plan.

OPPORTUNITIES:

- The City of New Castle waterfront has the potential for an important amenity for the Byway traveler as well as residents.
- The Fort DuPont Master Plan has the potential for an eco-tourism focus and destination providing for byway visitor amenities and services, which is discussed in Chapter 3.
- Policies in place to reduce sprawl and encourage development in and near existing communities, and to protect farmland.

CHALLENGES:

- Protecting the view from the road with new development that avoids sprawling residential subdivisions, big-box retail and heavy industrial uses.



The Reedy Point Bridge is a cantilever truss bridge that carries two lanes of State Route 9 over the C & D Canal. The bridge is 8,432 feet in length. Construction began in 1966 and was completed in 1968. It replaced the last lift bridge over the canal. On a clear day, the views from the bridge are spectacular.

- Integrating new development with the Byway's historic, natural and scenic characteristics.
- Enhancing the view from the road in areas where existing development, such as the northern industrial area of the byway that takes away from the Byway's scenic qualities and predominantly rural landscape.
- Addressing future renewable energy projects and identifying potential locations for these facilities that will not have an impact on the Byway character and its resources.

4.3.3 TRANSPORTATION ASSESSMENT

State Route 9 parallels the Delaware Bay coastal flood plain between the City of New Castle and Kitts Hummock Road at the Dover Air Force Base. It connects the incorporated cities of New Castle, Odessa and Delaware City; the communities of Leipsic and Little Creek; and the unincorporated communities of Port Penn, Woodland Beach, Pickering Beach and Kitts Hummock. Between the cities and villages, State Route 9 provides access to the maritime and the agricultural communities as well as the residents and businesses along its route. But State Route 9 is most familiar to many for the natural areas along its route including state wildlife areas and national wildlife refuges – Thousand Acre Marsh, Augustine Beach, Cedar Swamp, Woodland Beach, Bombay Hook, Little Creek and Ted Harvey Conservation Area. The state's largest refinery and supporting industries are located between the City of New Castle and Delaware City.

While traffic is relatively light throughout the corridor and traffic operations are typically congestion free, there is a mix of vehicle types that can be found using the roadway. Mostly expert and long-distance bicyclists can be found riding the corridor. Farm equipment uses the byway between fields to plant, tend to, and harvest crops. Trucks servicing the industries in the northern end as well as the farms in the south bring supplies to customers and products to market. Lastly, there are suburban residential areas along the route, concentrated just south of the City of New Castle, and near Odessa and State Route 299.

Yet, to the traveler, except for the link between New Castle and Delaware City, the byway is predominately a rural roadway and a very pleasant drive. To the farmer who moves equipment and product, and to the refinery and related industries, the ability to use State Route 9 in an unrestricted and safe manner is paramount. Insuring that the Byway is not only compatible with the purposes of the Byway but also permit the agricultural, maritime, and refinery industry to prosper is a balance that defines the context of the road.

Outdoor Advertising

Fortunately, the Route 9 Byway contains few billboards, none of which are electronic or are of the kind typically found along major highways.

Existing Transportation Situation

Assessing the existing transportation situation along State Route 9 requires an examination of physical characteristics, traffic volumes, vehicle types and users of the roads.

Physical Characteristics of the Roadways

The Byway is comprised of a series of different but connecting roadways and with different local street names. By 1932, what would become State Route 9 between the Kitts Hummock area and Leipsic was designated as a state highway, along with the road between Port Penn and Delaware City as well as between the Cities of New Castle and Wilmington. When state route numbers were assigned, State Route 9 was designated along its current routing from US Route 113 (now State Route 1) west of Kitts Hummock, north to US Route 13 in Smyrna. By 1942, what is now State Route 9 between the Taylors Bridge area and Port Penn was paved and by 1959 was extended north to US Route 13 in Wilmington. The current Reedy Point Bridge carrying State Route 9 over the Chesapeake and Delaware Canal was completed in 1968. State Route 9 was realigned to bypass the City of New Castle in 1984 by following Washington Street and State Route 273 (Ferry Cut-Off). In 2009, the Route 1 interchange at the southern terminus of the Byway was constructed.

The Byway Route is illustrated in Figure 4-1. The segments and their lengths are shown in Table 4-1



Even in the winter, the streams of the Delaware Bayshore are beautiful.

Table 4-1: Byway Segments and Distances

| Segment No. | Beginning | Ending | Communities/Natural Areas Included | Distance (mi.) |
|--------------------------------|---|---|--|----------------|
| 1 | Ferry Cut-Off/Chestnut Street | Wranglehill Road/River Road | City of New Castle and the loop of city streets including Ferry Cut-Off, Delaware Street, Second Street, Chestnut Street, Sixth Street, South Street and Seventh Street | 8.05 |
| 2 | Wranglehill Road/River Road | Delaware City-Port Penn Road/Reedy Point Road | Delaware City and the loop of city streets including Fifth Street, Clinton Street Delaware Street and Clinton Street | 5.59 |
| 3 | Delaware City-Port Penn Road/Reedy Point Road | Taylor's Bridge Road/Taylor's Corner Road | Port Penn, Augustine Wildlife Area. Also includes the Odessa Spur that includes Old State Road, Main Street and Middletown-Odessa Road | 10.98 |
| 4 | Taylor's Bridge Road/Taylor's Corner Road | New Castle County/Kent County Line | Cedar Swamp Wildlife Area, Blackbird Creek Reserve | 9.81 |
| 5 | New Castle County/Kent County Line | North Main Street/Denny Street | Woodland Beach Wildlife Area, Bombay Hook National Wildlife Refuge, Leipsic | 9.23 |
| 6 | North Main Street/Denny Street | Route 1 Interchange | Little Creek, Dover AFB, John Dickinson Plantation, St. Jones Reserve, Ted Harvey Conservation Area. Also Includes the Kitts Hummock Spur which includes Kitts Hummock Road and Bergold Lane | 13.25 |
| Total Distance including spurs | | | | 56.91 |



Farming is a major contributor to the state's economy. Most of the farms are family owned and farmed by the same family for generations.

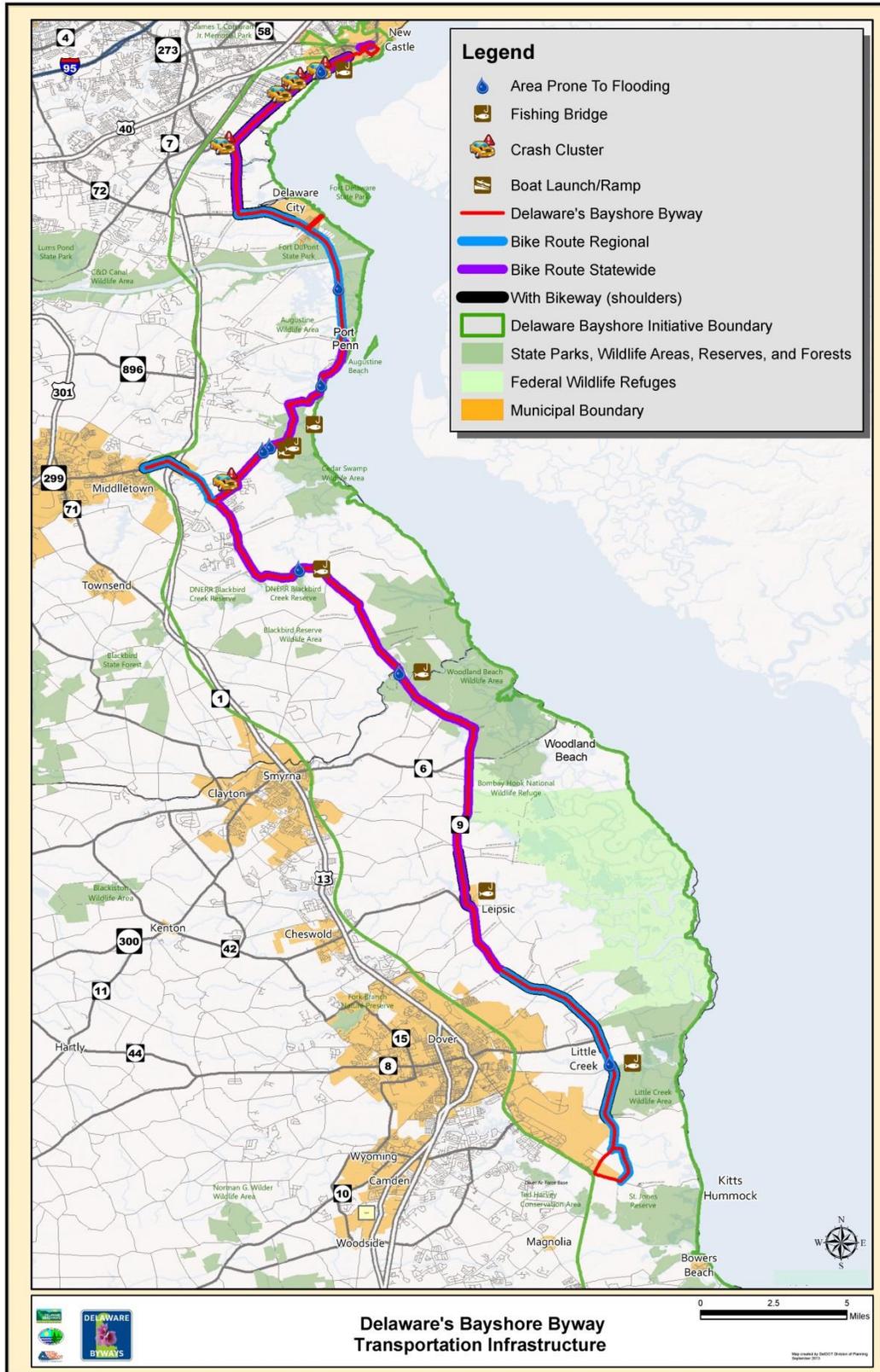


Figure 4.1 Existing Transportation Infrastructure Map

Figure 4.1 also illustrates the transportation features of the Byway. Throughout its length, the roadway consists of one travel lane in each direction. However, the width of that travel lane varies between 10 and 12 feet. Also not uniform throughout the corridor is the presence of and width of the paved shoulders. Shoulders, where present, vary in width from two feet to 12 feet. The posted speed limit also varies between 25 miles per hour in the cities and villages, and 45 or 50 miles per hour in the rural areas.

Current Travel Demand and Functional Classification

Traffic volumes range from almost 15,800 vehicles per day on the Old Ferry Cut-Off in the City of New Castle to about 400 vehicles per day at the New Castle/Kent County Line. Traffic volumes along State Route 9 are illustrated in Table 4.2.

Definitions of roadway functional classifications:

Arterial Roadways: The function of an arterial is to provide mobility. Although most arterials provide access to abutting land uses, that function is secondary to mobility. Typically, arterials carry the largest amount of traffic in the system the longest distances.

Collector Roadways: These roadways balance mobility with land access. Collector Roadways typically serve shorter distance trips, typically connecting nearby communities together.

Local Roadways: The primary function of local roadways is to provide abutting land uses with access. Accordingly, local roads serve mostly local traffic.

Table 4-2: Average Daily Traffic and Roadway Functional Classification (Source: DelDOT)

| Community | Street Name | From | To | AADT ² |
|---------------------------|------------------------------|------------------------------|----------------------------|----------------------------|
| New Castle | Old Ferry Cut-Off | Sixth Street | Delaware Street | 15,600 |
| | Delaware Street | Old Ferry Cut-Off | Market Street | Not Available ³ |
| | Market Street | Delaware Street | Chestnut Street | |
| | Chestnut Street | Second Street | Old Ferry Cut-Off | |
| | Sixth Street | Delaware Street | South Street | |
| | South Street | Sixth Street | Seventh Street | |
| | West Seventh Street | South Street | Washington Street | 8,850 |
| | West Seventh Street | Washington Street | City Line | 6,300 |
| | River Road | New Castle City Line | Wranglehill Road | 5,900 |
| | Wranglehill Road | River Road | Dragon Creek | 4,400 |
| Delaware City | Fifth Street | Dragon Creek | Old C-D Canal Bridge | 4,400 |
| | Clinton Street | Fifth Street | Delaware Avenue | Not Available ⁴ |
| | Delaware Avenue | Clinton Street | Washington Street | |
| | Washington Street | Delaware Avenue | Fifth Street | |
| | Delaware City-Port Penn Road | Old C-D Canal Bridge | West Market Street | 1,250 |
| Port Penn | West Market Street | Delaware City-Port Penn Road | St. Augustine Road | 900 |
| | St. Augustine Road | West Market Street | Fishenwarf Road | 900 |
| | St. Augustine Road | Fishenwarf Road | Bayview Road | 900 |
| | Bayview Road | St. Augustine Road | Silver Run Road | 700 |
| | Silver Run Road | Bayview Road | Thomas Corner Road | 850 |
| | Thomas Corner Road | Silver Run Road | Thomas Landing Road | 850 |
| | Thomas Landing Road | Thomas Corner Road | Taylor's Bridge Road | 1,100 |
| | Taylor's Bridge Road | Thomas Landing Road | Flemings Landing Road | 600 |
| | Flemings Landing Road | Taylor's Bridge Road | Paddock Road | 600 |
| | Flemings Landing Road | Paddock Road | Old Flemings Landing Rd | 400 |
| | Hay Point Landing Road | Old Flemings Landing Road | Smyrna Leipsic Road | 700 |
| | Smyrna-Leipsic Road | Hay Point Landing Road | Leipsic River Bridge | 1,300 |
| | Smyrna-Leipsic Road | Leipsic River Bridge | Front Street | 1,600 |
| Leipsic | Denny Street | Front Street | Second Street | 1,600 |
| | Denny Street | Second Street | North Main Street | 1,300 |
| | Bayside Drive | North Main Street | Persimmon Tree Lane | 1,300 |
| | Bayside Drive | Persimmon Tree Lane | Little Creek Road | 1,600 |
| Little Creek | Main Street | Little Creek Road | South Little Creek Road | 1,900 |
| | Bayside Drive | South Little Creek Road | State Route 1 Interchange | 1,450 |
| Odessa Spur | | | | |
| | Old State Road (SR 299) | Taylor's Bridge Road | Appoquinimink River Bridge | 5,000 |
| Odessa | Main Street | Appoquinimink River Bridge | Park Alley | 5,000 |
| | Middletown-Odessa Road | Park Alley | State Route 1 Interchange | 10,300 |
| Kitts Hummock Spur | | | | |
| | Kitts Hummock Road | Bayside Drive | Bergold Lane | 300 |
| | Bergold Lane | Kitts Hummock Road | Bayside Drive | 100 |

Legend: Principal Arterial ■ Major Collector ■ Local Roadways ■ **Source:** DelDOT

² AADT: Total yearly traffic divided by 365 days in a year.

³ Not part of the state highway system.

⁴ Not part of the state highway system.

The table also illustrates the functional classification the Byway roadways. Roads serve two functions – they provide mobility and land access.⁵ The functional classification of a roadway is a measure of how the road is used in performing the two functions. Functional classes of roadways are expressed in terms of arterial roadway, collector roadway and local roadway.

As shown in the table, most of the route is classified as a major collector. Significantly, however, Ferry Cut-Off is a principal arterial as it routes traffic around the City of New Castle between Wilmington and the major north-south routes such as I-95 and US Routes 13 and 40.

Types of Vehicles using State Route 9

In addition to automobile traffic, the type of vehicles that use the Byway includes industrial trucks in the northern area, farm equipment in the central and southern areas, and bicycles throughout the corridor. Trucks serving the refinery and its associated industries do not travel long distances on the byway, but use connector roads such as State Route 72 to access the State Route 1 and the other major regional roadways.



The refinery just north of Delaware City shown in this picture, along with supporting industries nearby adds a significant amount of truck traffic to State Route 9. Most of the refinery truck traffic accesses the major roadways using State Route 72.

In the central and southern areas, the agricultural industry relies on State Route 9 to move farm equipment from field to field, and to move produce to market. Unlike the operations at the refinery near Delaware City which is relatively constant throughout the year, truck traffic generated by the agriculture industry depends upon the season.

There is a large and thriving farming community along the Byway corridor, particularly in Kent County and in southern New Castle County. Potatoes, corn, soybeans as well as other crops are raised

and harvested. In tending to their crops, farmers must move equipment between and among their fields. The busiest times for moving equipment are in the spring planting season and in the fall harvesting season.

Farmers plan the movement of their expensive equipment carefully. If possible, the equipment is moved from field to field off the public roads. If it has to be moved on the public roadways, it is moved on lower volume roadways as a first priority. State Route 9 is avoided if possible. North of Smyrna-Leisic Road, it, too, is a lower volume roadway and the farming community relies upon it to move equipment.



Farming is a major industry along State Route 9 providing the means to move equipment between fields and produce to market.

⁵ Flexibility in Highway Design, Federal Highway Administration, March 13, 2012 (Updated)

Farmers typically move their equipment in the early morning hours, before the sun rises, using the lights and escort vehicles, avoiding the higher traffic during daylight hours. Two situations encountered on State Route 9 require extra caution when moving farm equipment. The first is where guardrail is placed adjacent to the travel lane and the second is where the pavement is lined with a deeply cut drainage ditch or abutted by marshland. Curves on the road exacerbate the situation.

The width of the equipment used by today’s farmers can be in excess of 20 feet in width. However, to be functional and movable between fields, the ability to ‘fold’ the equipment to a narrower width is designed in. Not all of the equipment can be folded to fit into a 10 foot travel lane; due to its off road design, the equipment can operate with one side of the equipment traveling off the pavement if it is graded. Additionally, the machinery is equipped with flashing lights for safety.

Cycling along the Byway

While State Route 9 is quite scenic and could be enjoyable for bicyclists, it is also very challenging given its length and isolation from services typically used by bicyclists. The low traffic volume allows bicyclists to safely share the road in most areas, particularly where shoulders are currently too narrow or non-existent. State Route 9 is an important part of Delaware’s Bicycle Route System.



The picture on the left shows State Route 9 in New Castle County which has a shoulder for bicycles to travel separately from the traffic stream. The picture on the right, also in New Castle County, shows a section without bicycle facilities, meaning bicycles and motorized vehicles must share the travel lane.

Delaware classifies its bicycling routes two ways. First is whether or not the roadway has provisions for bicyclists such as a shoulder or a wide outside lane that provides sufficient room for bicyclists to ride in a path separate from the general traffic stream. Or the roadway does not have such a provision and bicyclists must share the travel lane. The second way is by what the route connects.

In Delaware, bicycle classifications are as follows:

- Highest classification -- the Statewide Bicycle Route which connects the state’s three counties.
- Second classification -- the Regional Bicycle Route which connects major municipalities and activity centers.
- Connector classification -- routes that link local activity centers to the larger bicycle network.



**East Coast
Greenway.**

The East Coast Greenway is a developing trail system, spanning nearly 3,000 miles as it winds its way between Canada and Key West, linking all the major cities of the eastern seaboard. Over 25 percent of the route is already on safe, traffic-free paths.

In New Castle County, except between State Route 72 and Port Penn, State Route 9 is a Statewide Bicycle Route. Between State Route 72 and Port Penn, it is a Regional Bicycle Route. The Odessa Spur in New Castle County is a Regional Bicycle Route. The statewide classification extends into Kent County to south of Leipsic and Persimmon Lane where it becomes a Regional Bicycle Route. At the southern end of the Byway, the Regional Bicycle Route follows the Kitts Hummock Spur.

In the City of New Castle, bicyclists riding in the streets are a common sight, particularly in the historic area of downtown. Supporting the street system is the East Coast Greenway. Within the City, the current route begins at the southern terminus of the Industrial Track Trail, and then follows along State Route 273 to Delaware Avenue to Battery Park. It travels through Battery Park to Route 9 then along Route 9 to Washington Street where it returns to State Route 273.

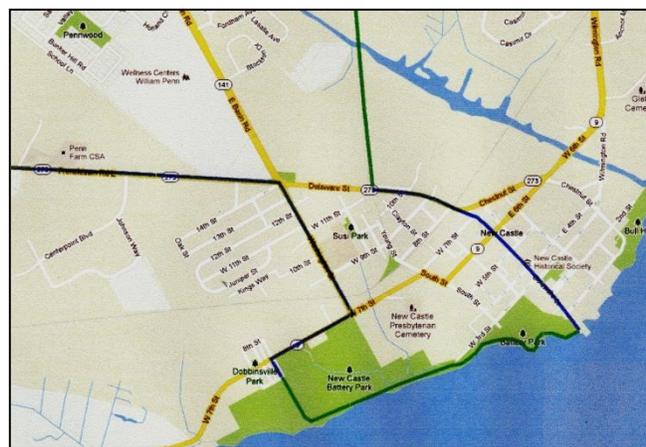
Public Transportation

There are no public transit routes serving State Route 9.

Connections to other Regional Byways

Delaware's Bayshore Byway overlaps with the Harriet Tubman Underground Railroad Byway between Odessa and City of New Castle, traveling southeast on State Route 299, the Odessa Spur and then north on State Route 9 into the City of New Castle where Delaware's Bayshore Byway ends. The Harriet Tubman Underground Railroad Byway then continues to Wilmington and beyond.

The State of New Jersey has designated a series of roadways along its side of the Delaware Bayshore as the Bayshore Heritage Byway. The Delaware City-Salem Ferry, operated by the Delaware River and Bay Authority not only connects the two byways but also provides access to Fort Delaware on Pea Patch Island, Fort DuPont and Salem on New Jersey's Bayshore Heritage Byway. The Delaware City-Salem Ferry operates four round trips per day during the spring and summer months except on Mondays and Tuesdays when it does not operate.



Route of the East Coast Greenway through the City of New Castle.



The Delaware City-Salem Ferry Boat, the Delafort, docked and awaiting passengers at its berth in Delaware City.

Safety Assessment

A Byway must provide a safe environment for all users, current and future to travel along it whether for business or pleasure. This safety assessment is driven by both crash statistics and by observation.

Crash Statistics

Crash data from DeIDOT’s CARS data base was analyzed for the period beginning July 24, 2009 and ending July 24, 2012. During this three-year period, 115 crashes were analyzed for the 57-mile corridor of the Byway and spurs. Eight crashes occurred in the Kent County portion and 107 occurred in the New Castle County portion. There were 60 injuries and one fatality. There were no crashes involving pedestrians or bicycles.



This section of State Route 9 has no shoulders and 10 foot lanes.

The crash data also revealed:

- 47% of the crashes occurred in the daylight hours. 79% occurred when the weather was clear or cloudy and 70% occurred on dry pavement.
- 32% of the crashes involved hitting another moving vehicle. 52% involved hitting a fixed object such as a sign post, ditch or embankment along the roadside and 16% involved hitting an animal, most likely a deer.
- Impaired driving was a factor in 22% of the crashes, 16% involved a deer in the roadway and 18% involved some kind of reckless driving.

Review of the overall data set indicates that managing a safe roadside must be part of this plan. The locations with the highest concentration of crashes are shown in Table 4-3.

Table 4-3: Crash Clusters

| County | Location | General Area | No. of Crashes |
|------------|---|---------------------------------|----------------|
| New Castle | Intersection of River Road and Hamburg Road | Between New Castle and Route 72 | 11 |
| New Castle | Intersection of River Road and Langollen Drive | Between New Castle and Route 72 | 9 |
| New Castle | Intersection of River Road and Grantham Lane | Between New Castle and Route 72 | 9 |
| New Castle | Intersection of Old Corbett, Thomas Corner and Silver Run Roads | South of Appoquinimink River | 9 |
| New Castle | Curve south of New Castle City Line | Between New Castle and Route 72 | 7 |

As shown in the table, of the five cluster locations, four occurred between the City of New Castle and State Route 72 in New Castle County. These clusters comprised 36 of the 115 crashes analyzed or 31% of the crashes. In all, 63 crashes occurred in the 6.3 mile section of the Byway between New Castle City Line and Route 72. This represents 55% of all crashes occurring in the corridor.

Typical Section

While State Route 9 provides one travel lane in each direction, it has different cross sections throughout its length. Within the City of New Castle, curbs, sidewalks and on-street parking are typically provided. Similarly in Odessa, Delaware City, Port Penn, Leipsic and Little Creek, curbs, sidewalks and on-street parking are provided. In the rural areas, shoulders are provided along only part of the Byway. The cross sections of State Route 9 in the rural areas outside the towns and villages are shown in Table 4-4.

Table 4-4: Rural Cross Sections of State Route 9

| County | From | To | Lane Width | Shoulder Width |
|--------------------|----------------------|----------------------------|------------|----------------|
| New Castle | New Castle City | Delaware City | 11 | 9 ft. |
| | Delaware City | County Line | 10 | None |
| Kent | County Line | Smyrna Leipsic Road | 10 | None |
| | Smyrna Leipsic Road | Leipsic | 11 | 8 ft. |
| | Leipsic | Little Creek | 11 | 2 ft. |
| | Little Creek | Kitts Hummock Road | 11 | 4 ft. |
| | Kitts Hummock Road | State Route 1 Interchange | 12 | 8 ft. |
| Odessa Spur | Taylor's Bridge Road | Appoquinimink River Bridge | 10 | None |
| | Park Alley | State Route 1 Interchange | 12 | 10 ft. |
| Kitts Hummock Spur | Bayside Drive | Bergold Lane | 10 | None |
| | Kitts Hummock Road | Bayside Drive | 9 | None |

As shown in the table, the only shoulders are located between the City of New Castle and Delaware City and from Smyrna-Leipsic Road to State Route 1. In the locations with no shoulders, the travel lanes are mostly 10 feet wide. In all, in the rural section of State Route 9, 23 miles have a paved shoulder of some width while 26 miles do not have a shoulder at all.

Given the predominance of run off the road crashes, shoulders and proper roadside treatments are important. However, much of the roadside is bounded by wetlands, including marshlands. Improving the roadsides to include shoulders requires special environmental permits.

Fishing From the Bridges of State Route 9

The sight of fisherman fishing from the Byway bridges is common and an activity that continues to be a part of the Byway corridor lifestyle for a long time. Fishing has



Some of the Bridges on State Route 9 have provisions for fishing built in to them.

also been integrated into the design of a number of the structures along State Route 9. It is an activity that, due to its popularity, needs to be accommodated in the future design of the structures crossing waterways along the Byway. There are seven structures across waterways of sufficient size and depth to be fruitful to the fisherman. To provide a safe environment for fisherman, there needs to be a safe place to fish from and a place for fisherman to park. Table 4-5 shows the structures at which fishing activity has been observed and those that with improvements could accommodate fishing.

Table 4-5: Provisions for Fishing from State Route 9 Bridges

| Bridge Location | Waterway Crossed | Fishing Walkway on Bridge | Adjacent Parking Area |
|-------------------------------|------------------------|--|-----------------------|
| Delaware City –Port Penn Road | Long Marsh Impoundment | No. Area provided adjacent to roadway | Yes |
| Silver Run Road | Silver Run | Yes. Protected | Yes |
| Silver Run Road | Appoquinimink River | Yes. Protected | No |
| Silver Run Road | Appoquinimink River | Yes. Protected | No |
| Taylor’s Bridge Road | Blackbird Creek | Yes. From Shoulder, unprotected | No |
| Flemings Landing Road | Smyrna River | No. Area provided adjacent to boat launch area | Yes |
| Smyrna-Leipscic Road | Leipscic River | Yes. From adjacent boat launch area | Yes (Private) |
| Bayside Road | Little Creek | Yes. Protected | Yes |

Marinas and Boating Facilities

There are eight facilities providing services to boaters along or near the Bayshore Byway. These facilities are typically located along the creeks that cross the Byway or drain into the Delaware Bay and River. Facilities also on the Transportation Infrastructure Map can be found at the following locations:

- Battery Park, City of New Castle.
- Canal Wildlife Area / C&D Canal, Delaware City/Fort DuPont (including the Delaware City-Salem Ferry to Fort Delaware and New Jersey).
- Augustine Beach (boat launch only).
- Collins Beach (boat ramps only) at Cedar Swamp Wildlife Area
- Blackbird Creek (Canoe/Kayak launch at Blackbird Creek Reserve
- Woodland Beach (boat ramps only) at Duck Creek.
- Woodland Beach (boat ramp only)
- Full Service Marina, Leipscic River, Leipscic.



Boats docked at the marina at Fort DuPont on the old C-D Canal in Delaware City.

- Port Mahon (boat ramp only) near Town of Little Creek.
- St. Jones River at Scotton Landing
- St. Jones River at Lebanon Landing

Sea Level Rise

The Bayshore Byway traverses the coastal plain of the Delaware Bay and its most low-lying sections are prone to flooding. Today, flooding of the roadway has been more frequent and occurring during less intense storm events. The State of Delaware, through its Sea Level Rise Advisory Committee, monitors and plans for the impact caused by sea level rise. If current trends continue, and sea level rise continues at its current rate of 0.13 inches per year in the next 10 years, then in 20 years, the mean sea level will rise about 2.5 inches further increasing the flooding experiences along the Byway corridor.

The locations that currently experience flooding conditions along the Byway are as follows:

- Between the City of New Castle and Delaware City in the vicinity of Army Creek
- Between the C&D Canal and Port Penn
- South of Augustine Beach at the Augustine Creek
- On Silver Run Road at three locations: Silver Run Creek, Appoquinimink River, and Drawyers Creek
- Taylors Bridge Road at Blackbird Creek
- Hay Point Landing Road at Taylors Gut
- Bridge over Little Creek



Boating piers on the Leipsic River

Planned/Proposed Transportation Improvement Projects

State Route 9 is a state maintained roadway. Review of the currently active improvement plans reveals the following:

New Castle County

- State Route 9, Delaware and Harmony Street Intersection Improvement Project – Originally, this project was to improve access to the City of New Castle from Ferry Cut-Off by extending Harmony Street to the Cut-Off as well as improving the intersection of the Cut-Off with

Delaware Street. The project is being reconsidered by DeIDOT in a joint effort with the City of New Castle to develop a context sensitive solution that addresses the multi-modal circulation needs of the community and the National Register Historic District, as a gateway to Delaware’s Bayshore Byway, and an important segment on the Harriet Tubman Underground Railroad Byway.

- State Route 9, River Road Area Improvements, Flood Remediation – Frequent flooding of State Route 9 in the area of the Army Creek makes the road impassible. Design will include realigning Route 9 onto a viaduct. Retrofit of the tidal gates will also be pursued by DNREC as a companion project.

Eco-tourism opportunities include the Delaware Birding Trail and Bombay Hook National Wildlife Refuge.

2007 Comprehensive Plan, Kent County

Kent County

- No improvement projects are planned.

Transportation and Safety Opportunities and Challenges

The existing Transportation infrastructure Map illustrates the issues brought forward in the preceding paragraphs. The map shows bicycle facilities, shoulder locations, sections prone to flooding, crash clusters, boat launch ramps, fishing bridges, as well as the towns and communities of the Byway. It is from this map and other site and data collection that the challenges and opportunities that follow were identified.

OPPORTUNITIES:

- The majority of Route 9 is a low volume route that is generally safe.
- The analysis and designation of Route 9 as part of the statewide bicycle network is conducive to identifying the bicycle friendly elements needed to complement the designation.
- The State is developing a plan to address sea level rise.
- DeIDOT will be installing Byway trailblazing signs.
- DeIDOT is planning a context sensitive project for the northern byway gateway in New Castle.

CHALLENGES:

- A roadway cross section that provides a safer roadside, and accommodates farm equipment and bicycles needs to be developed.
- A safe area for fishing from the right of way, either on the structure as an area separated from the roadway by a barrier as well as a safe area for parking needs to be developed as demand requires.

- As noted in Chapter 2, safe areas for birding, wildlife viewing and to enjoy the view sheds for motorists.
- The frequency and depth of flooding.
- Signing and wayfinding to existing attractions is inconsistent and not inclusive of the Discovery Zones or the location of services to travelers.

4.3.4 COMMUNITY QUALITY AND ECONOMIC POTENTIAL

Delaware's Bayshore Byway is an untapped resource for eco-tourism, and economic development associated with the services and amenities for byway travelers. The City of New Castle, Delaware City, Port Penn and Odessa are already taking advantage of the natural and historic assets of their communities and nearby resources to attract residents and visitors. Leipsic and Little Creek are poised also for services and amenities to accommodate traveler needs.

The CMP will draw upon the following documents, among others, and existing community initiatives to develop management strategies and reveal the potential for economic development within the byway corridor. The

Byway could be strengthened to achieve locally based economic development that is consistent with the byway character and the needs and plans of each Discovery Zone.

The **New Castle County Economic Development Business Guide** does not mention tourism but includes goals within the Sowing Seeds Growing Jobs Program that could support the Byway:

- Expanded program is to promote locally made manufactured and artisan goods, and support local independent businesses through partnerships with Rely Local, Main Streets, and Delaware by Hand with a webpage to buy local.
- The "Buy From Your Neighbor/Made in New Castle County Challenge" strengthens assistance to local businesses giving them more credit when competing for County Business with point percentage allocation doubled for Delaware firms bidding on professional services.
- The goal to expand tourism and the Main Street Program supports the goals of this Corridor Management Plan.

Kent County Comprehensive Plan (2007) states that the County's economy is diverse with jobs in government, manufacturing, tourism, agriculture and financial services. Recommendations for economic development, which support the Byway's vision and goals include:

The 721 farms of Kent County total 185,329 acres or 49.1% of the County's land area. The farming community contributes the following to the economy of the County:

- 1. Market Value of farm production: \$128,675,000 of which livestock sales contribute \$54,400,000 and crop sales contribute \$74,276,000.*
- 2. Average farm net cash income from 2002 operations was \$58,418 with 398 farms reporting net gains in income.*

2002 Farm Census

- Tourism is a newly emerging industry within the County that can target a wide range of interests including arts and culture, history and heritage, sports and gaming, outdoor recreation, and shopping and leisure.
- Agriculture remains a vital and significant sector of the economy in Kent County.
- Infill and redevelopment is promoted to optimize existing infrastructure, creating transit corridors with a mix of housing and relieve the pressure of “Greenfield Development;”
- Protection and promotion of agriculture in coordination with the Department of Agriculture to develop and promote farm markets and other agri-business opportunities.
- Develop a strategy in cooperation with the Delaware Economic Development Office, Chamber of Commerce, and Central Delaware Economic Development Council to reach the small business community and provide information and assistance.
- Retail is one of the largest employment sectors but is challenged by new retail displacing older establishments. “Create ordinances that prohibit “big box” development without the planning for the adaptive reuse of the proposed development project including the land and buildings thereon in order to avoid “dark” stores and promote community vitality.” It is critical that the county and municipalities not only encourage more compatible retail that is context-sensitive to the location but to examine tools that provide incentives for small business and unique retail, restaurants and lodging entrepreneurs to locate within the byway corridor.

The Economics Associated with Natural Areas in the Delmarva Peninsula is a report that examines the Delmarva Peninsula’s natural areas and outdoor recreation in terms of measurable economic benefits. The report indicates 395,000 anglers, hunters and wildlife watchers spending \$659,877 for trips and equipment in Delaware. The report summary of findings indicates the following:

- The total contribution from camping, biking, and trail based recreation in the Delmarva Peninsula is \$1.07 billion a year and generates over 11,000 jobs throughout the region. Included in this total is almost \$80 million in gear retail sales, \$830 million in trip-related sales and over \$150 million in federal, state and local taxes.



Shops and dining along historic New Castle Street on the Byway

- Hunting, fishing and wildlife watching engaged more than 1.6 million people on the Delmarva Peninsula, of which 570,000 fished, 184,000 hunted and nearly 1.3 million enjoyed wildlife watching. While pursuing all of these activities, they spent more than \$1.5 billion.
- Recreational boating contributed more than \$1.3 billion in sales that supported over 11,000 jobs and paid out over \$400 million in wages.
- Combined, outdoor recreationists such as boaters, hunters, anglers, cyclists and others annually spend up to \$3.9 billion to enjoy Delmarva's natural areas. These dollars support upwards of 27,900 jobs.

Discovery Zones and Quality Tourism Amenities

The beauty of this byway is its natural and recreational resources along with the historic coastal communities of New Castle, Delaware City, Port Penn, Odessa, Leipsic and Little Creek. As a result, tourist amenities, such as hotels, restaurants and even gas stations are limited within the byway corridor. This presents an opportunity to concentrate economic development potential on place-sensitive traveler amenities that embrace the unique natural and historic character of the byway. Small inns, bed and breakfast establishments, and cabin and camping facilities that are eco-friendly are needed and necessary amenities to accommodate the existing and future byway traveler. Additional restaurants, retail shops and traveler services should be carefully integrated into existing communities.

Today, traveler amenities can be found a short distance off the byway in the City of Wilmington, Towns of Middletown and Smyrna, and in the City of Dover but these communities are not on the byway. It is critical to expand upon the existing byway traveler amenities and capitalize on the Discovery Zone potential to provide unique services and amenities that reflect the rich variety of historic, natural, and scenic qualities within them.

Directed Tourism Opportunities and Challenges

Review of the existing site conditions, services, amenities, initiatives and studies already in place have revealed the following economic development opportunities and challenges for the Corridor Management Plan.

OPPORTUNITIES:

- 432,000 participants in hunting, fishing and wildlife watching in Delaware alone (residents and non-residents) in 2011. They spent \$351 million in trip-related and equipment expenses and \$90M in trip related expenses alone. (USFWS 2011 Survey)
- An estimate of 1.6 million people participated in hunting, fishing and wildlife watching in the Delmarva Peninsula (Delaware, Maryland and Virginia). (Associates, April 2012)
- Historic structures and undeveloped sites along byway main streets.
- State and county policies to encourage tourism and agriculture industries to be retained or expanded upon.

- Potential for added services and amenities for current travelers.

CHALLENGES:

- Lodging and other visitor services need to be increased in existing communities, private lands adjacent to public lands, and within public areas (where compatible with conservation mission) throughout the Byway corridor.
- Integrating the Byway and Bayshore Initiative with the major redevelopment plans for Fort DuPont.
- The need to better understand the existing and potential visitor, tourist market, and the amenities that will improve and increase stays.
- A plan to encourage viable local businesses that are unique to the corridor, and support the needs of its residents and visitors.
- Directing travelers along and to the byway attractions and Discovery Zones is generally inconsistent or in some cases, non-existent.

CHAPTER 5 PRESERVING & ENHANCING THE BYWAY



5.0 INTRODUCTION

In the previous chapters of this Corridor Management Plan, the story of Delaware's Bayshore Byway and the stories of each of the ten Discovery Zones have been told. Taken together, these stories are compelling and describe the history, culture and people striving to preserve their way of life as part of an ecosystem that is constantly changing. But for the efforts of its residents and all those who care about the Delaware Bayshore, both within government and in the private sector, this special part of the state would have been lost forever to industry. Yet as the story has been told, current opportunities and challenges emerged. Some are easy to solve while others can only be managed. Nonetheless there is a spirit that permeates the Bayshore, a can-do spirit that will bring the Byway to life as it connects the communities together and provides access to the natural treasures that abound.

This chapter provides the framework that embraces the Byway story and lays out the path so that the story never ends. It highlights the path forward organized under the CMP goals set forth by the communities and residents. The strategies and recommendations outlined in this chapter are the framework, which is developed into a plan of action that will enable the Byway story to live forever.

The Path Forward: Corridor Management Plan Strategies

As the examination of the Byway corridor proceeded challenges and opportunities emerged that are outlined in Chapters 3 and 4. This CMP recognizes and applauds the efforts by private citizens and organizations, and government agencies already engaged in activities that are integral to the Bayshore/Byway vision. Most of the coastal towns and natural areas have been working on individual plans and strategies to enhance their particular areas. The Bayshore Initiative sets the stage for a more regional and impactful program with which the Byway is aligned. Many of these same stakeholders are leaders in the CMP and are poised to engage in its implementation. The goal of the CMP is to be additive and complimentary to the current activities and programs either by supporting/aiding them to be more effective or to engage and focus on broader activities that are necessary to develop the concept of the Bayshore region.

A number of specific potential projects and recommended actions for each of the 10 Discovery Zones are included in Chapter 3. These recommendations, strategies and action items should be viewed in concert with those contained in this chapter. It is also important to recognize at the outset that when developing the action items for a window of time that consideration be given to the status of all initiatives in the Bayshore and in the towns and communities of the Bayshore. This will insure that all actions are coordinated.

5.1 SETTING THE GOALS

Working with the Planning Advisory Committee, seven goals were established. Within each goal, a set of objectives or measurable results were defined to guide the CMP. The goals are:

GOAL 1: Brand and Market the Bayshore and Byway

Branding and positioning Delaware's Bayshore locally, regionally, nationally and globally involves fitting the Byway within the envelope of the Bayshore brand. This is the key goal of the CMP. This potentially develops regional awareness that benefits all the Discovery Zones making "the whole greater than the sum of the parts". This effort began during the CMP process. DNREC, as the lead agency for the Bayshore Initiative, is working closely with the Byway leaders toward meeting this goal. Initial costs for this effort are supported by DNREC. Potential future sources of funding to accomplish this effort include funding from the DEDO, bond bills and grants. Meetings are already scheduled to discuss moving forward with a process for branding and positioning.

Key elements of this effort include:

1. Work with professionals and stakeholders to develop a branding image and marketing concept based upon eco-and heritage-tourism of the Bayshore.
 - a. Insure that the marketing concept retains the local charm and highlights the resources of the Discovery Zones as distinctive components of the brand.
 - b. Respect the people, industries and lifestyle of the Bayshore communities.
2. Gain an understanding of the economic potential of the Bayshore by examining the potential audience.
 - a. Develop the marketing regional theme, logos, materials (digital and paper promotional brochures, etc.) drawing from these early positioning efforts drive. Two significant short-term deliverables are to (1) develop a marketing brochure of existing attractions during the first year, and (2) sign the Byway following the principles of the Manual on Uniform Traffic Control Devices (MUTCD). In addition, develop an event or series of events to launch Delaware's Bayshore Byway. Use the launch to link the Byway to other ongoing initiatives throughout the Bayshore such as the Delaware Outdoor Adventures Trail and events in the ten Discovery Zones.
 - b. Manage sign clutter to improve efficiency of communication of message and appearance of the Byway.

GOAL 2: Conserve the Natural Environment

The protection and preservation of the community and other vital assets in the Bayshore corridor including the working landscape, natural qualities and critical scenic viewsheds is a critical priority for the Bayshore region and the Byway. These qualities represent the natural and environmental intrinsic values that make the Bayshore a special place. This effort will be driven largely by existing organizations (DNREC, Delaware Department of Agriculture, County government, as well as partnerships with non-profit organizations like Delaware Wild Lands, Delaware Nature Society, and private citizens). The byway leadership role is to monitor the byway key areas and its viewsheds and catalyze the ongoing conservation efforts. Funds for this ongoing effort will come from Federal and State grants, Delaware Open Space Council and through partner organizations and other sources.

1. Work with all stakeholders (residents, organizations, communities, local leaders and government entities) to maintain the Bayshore's unique natural character by identifying, protecting and restoring key byway natural lands, habitats and viewshed.
2. Address sea level rise by supporting and participating in the work of the Sea Level rise Advisory Committee and State Government.

GOAL 3: Support Community Aspirations

Focus on providing guidance and assistance to the Bayshore corridor communities so that they can be successful within the framework that best serves each community.

1. Work with citizens, local government and caretakers of our natural areas and communities to define and develop appropriate economic development and improvements of the Discovery Zone assets that are consistent with the character of the corridor.
2. Identify specific actions to meet the aspiration of the:
 - a. Coastal Communities
 - b. Main Street Communities
 - c. The Agricultural Community
3. Catalyze/ lead/support partnerships among the coastal communities
 - a. Form a team of community leaders, private industry and waterway experts to evaluate and catalyze increased use of the waterway assets as eco-tourism destinations.
 - b. Explore broadening the range of key attractions (e.g., include Port Penn natural attractions in Delaware City efforts, potential historic events that include both New Castle and Odessa).



Shadybrook Farms is a major farm operation along the Byway

GOAL 4: Enhance access to and use of the Bayshore Natural Area Discovery Zones

Enhance access to and use of the natural area Discovery Zones of the Bayshore by improving facilities, programming, signage and way finding while respecting the wildlife mission of these areas. These programs will be driven by DNREC and U.S. Fish and Wildlife through State and Federal funds. One immediate action is the execution of the \$840,500 National Scenic Byways Discretionary Grant awarded to DNREC. Funds were awarded for scenic overlooks and wildlife viewing, interpretation and amenity enhancements at various Natural Area Discovery Zones along the Byway.

1. Partner with U.S. Fish and Wildlife and DNREC to comprehensively plan for improvements that enhance individual sites in a coordinated fashion to meet the needs of today's and future visitors. The BMO partnering effort will be (1) to help provide input, (2) to make sure that there

is consistency with the Discovery Zone concept, and (3) to coordinate with the evolving branding and positioning effort.

2. Work toward a unified approach for the Bayshore environment that is recognizable and sustainable and where funds are effectively spent to result in the greatest benefit.
3. Implement actions to support the Bayshore goals of Conservation and Restoration; Recreation and Connectivity; and Engagement and Marketing.

GOAL 5: Maintain the Context, Safety and Character of Route 9

Ensure that the road corridor is travel safe for all users – drivers, cyclists, walkers, anglers, birders and farmers and that there is appropriate environmentally sensitive access to key attractions and discovery zones. This goal will be achieved through a recognition of landowner desires to maintain the road width and minimize/eliminate any need to expand unto private property.

1. Provide facilities so that all boating, commercial and recreation, is accommodated in a safe and environmentally respectful manner.
2. Expand pedestrian and bicycling facilities where appropriate along the Byway so that the Discovery Zones can be explored on foot and on bicycle.
3. Insure Discovery Zone access accommodates groups and individuals, and is family friendly.

GOAL 6: Interpret the Bayshore to educate current and future generations and enhance healthy life styles

Assure current and future generations will continue to understand and experience the Bayshore story, and consequently will be good stewards of the assets that contribute to the area's natural and historic heritage.

1. Make the Bayshore story come alive for all travelers.
2. Create an interpretative plan that conveys value of this story to the public.
3. Work with the education community to engage the young and old in a learning experience about the Bayshore.
4. Work with the various organizations that are actively developing plans for engaging children and families in outdoor recreation and education including the Delaware Children in Nature/No Child Left Inside Initiative, which is a partnership among the state agencies, non-governmental and civic organizations.

GOAL 7: Manage the Byway as an ongoing enterprise

Designate an organization, such as a Byway Management Organization (BMO) to manage the affairs of the Byway through a public participatory process to:

1. Implement the Corridor Management Plan.

2. Advocate for, protect and enhance the Byway through coordination among stakeholders, interested parties, projects and actions undertaken and sponsored.
3. Respect the varied interests along the Byway.

5.2 DEVELOPING STRATEGIES AND RECOMMENDATIONS

The following strategies emerged through discussions and meetings with the Byway stakeholders. These five strategies were identified as the overarching strategies for the byway organization to implement. Following these, there are other strategies and recommendations defined by the Planning Advisory Committee and Bayshore stakeholders. They are a collection of strategies that both meet the requirements of the National Scenic Byways Program and work toward achieving the Byway vision. In an annual review of the CMP, the BMO, Discovery Zone leaders and advisors can determine priority actions for the upcoming year. Following each goal is a table summarizing the strategies and recommendations.

1. Branding and positioning the Byway.

Branding the Bayshore and positioning it as a special place while respecting the way of life of the residents and the communities along the way is a necessary first step. The Byway is the thread through the Bayshore as “The Road Less Traveled” and provides access to the Discovery Zones. Undertaking this strategy will insure that the bigger story is not lost among the individual Discovery Zone stories. The intent of this strategy is to position the Bayshore and the Byway as an eco-tourism destination. It enables the tourism industry, the Discovery Zones and attractions to market and promote in a coordinated manner to accommodate eco-tourism and educational programming that is complimentary and not in conflict with other. The Byway and the Bayshore efforts have brought together federal, state, county, communities and local residents along with other conservation organizations to begin this work.

2. Building respect and support for the Byway for generations to come.

Educating the residents and travelers so that future generations learn to respect, value and protect the Bayshore and the Byway communities is an essential strategy for the Byway. The Bayshore was saved from large scale industrial development by Delawareans who understood its value. Developing that sense of value in future generations is critical to maintaining a pride of ownership among Delawareans of all walks of life. It is the intent of this strategy that throughout the Bayshore and Byway that a coordinated effort is made to work with the schools and other organizations to build upon and establish new programs designed to pass the value of this treasure to future generations.



Leipsic River

3. Maximizing the potential of the water.

Harnessing the waterways is an integral element of the Byway not only as a mode of transportation but as a recreational asset and source of sustenance. The Delaware River and its tributaries are used for commercial fishing, recreational activities such as pleasure boating, kayaking, fishing, crabbing, and other eco-tourism activities. Coordination among the activities is lacking and the infrastructure is currently not adequate to meet the needs of the activities. Better infrastructure would permit watercraft of different sizes and speed capabilities to operate and access more areas up and down the Bayshore. This is an opportunity to evaluate, promote and catalyze eco-sensitive water-based economic development that enhances the traveler experience.

4. Enhancing natural areas along the Byway.

Making the attractions and resources of the Byway accessible to people of all walks of life is an important opportunity and a challenge to welcome people to Delaware's Wild Side. At a number of venues, public access and public facilities are limited. While public access and facilities exist along the Byway, improving the public's awareness of what exists would increase the quality and frequency of the visitor's experience.

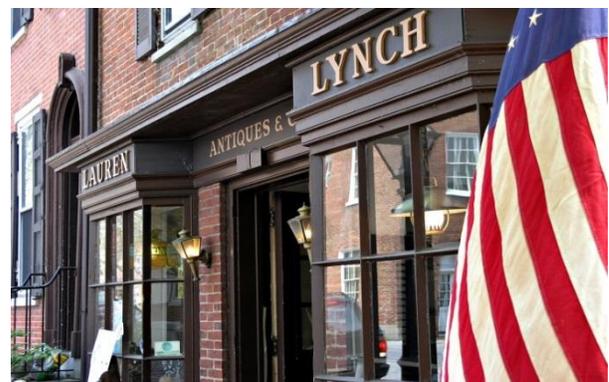
In addition, Route 9 meanders through natural marshes and crosses waterways offering spectacular views and good fishing. The challenge is to provide a safe environment for all travelers whether they come to fish, observe birds and other wildlife, or to enjoy the scenery. With birders from all over the world already coming to the Bayshore and Byway, access to public lands is a strategy to avoid or discourage trespassing on private lands. This can be accomplished by improving facilities so people can learn about and experience the wonders of Delaware's Wild Side.



Boardwalk Trail at Bombay Hook National Wildlife Refuge

5. Providing coastal town place-based economic development.

The individual histories, characteristics and personalities of the local Bayshore towns are a Delaware treasure. The ability of each local town to develop economically to insure its survival as well as its place in the living history of the Bayshore is a critical component of the Byway program. Supporting the individual needs of the towns that have difficulty with generating sufficient revenues requires constant attention. The challenge is assisting each community



Antiques Shop in New Castle. The theme of this shop fits perfectly with the character of New Castle.

to encourage businesses that are compatible with the desired vision for the Discovery Zone and growth that is sustainable with the Bayshore character.

Below are the additional strategies that are organized under the CMP Goals. The top overarching strategies listed above are integrated in this section, which addresses challenges while capitalizing on the opportunities of the Bayshore and Byway. The priority strategies are the foundation for the CMP Action Plan.

5.2.1 GOAL 1: BRAND AND MARKET THE BAYSHORE AND THE BYWAY

CMP BYWAY MARKETING PLAN

The Corridor Management Plan process has renewed interest in the need to brand and market Delaware's Bayshore and Byway. As noted by the tourism community, it will be critical to also address the lack of visitor amenities and services first. Even though there is a lack of services, moving forward to plan for and undertake the necessary studies and analysis to brand and market should not be delayed.

1.1 Develop a Marketing Brochure.

Within the first year, DNREC in coordination with the BMO will develop a brochure to provide information about and promote the Bayshore. Funding for this product has been secured.

1.2 Coordinate with Delaware Tourism Office's Outdoor Recreation Trail Program

The first year's goal is to link the Byway to the Outdoor Recreational Trail Program with cross promotional literature coordinating with the recreation trails with the Byway and the Discovery Zones.

1.3 Prepare an Economic Development Study

The low level of visitation to many areas of the Byway Corridor is not conducive for visitor-related service businesses to thrive. This strategy focuses on building visitor services in the Community Discovery Zones. Undertake a study of the existing and potential traveler, tourist market, and the amenities that will improve the visitor experience as well as increase stays. Through the study, identify the best ways to advise and encourage viable local businesses that are unique to the corridor to take advantage of new business opportunities. Lastly, use the study to support and respect the needs and desires of local residents and identify the levels of tourism so that the provision of facilities and services for visitors is appropriately and economically staged. Establishing the Bayshore and Byway as a global eco-tourist destination suggests that visitor services, such as lodging, may need to include more rustic accommodations associated with the extensive public land assets. Hotel, lodges and inns, or any new development to meet the visitor needs should be designed sustainably and fit into the natural character of the area.

1.4 Prepare a Brand Development and Marketing Plan

Positioning the Bayshore and Byway as a unique eco-tourism and heritage tourism destination within its economic potential is a second step once the target market is understood. It is important to determine the audience that might be marketed to. It could include school children and birders to history buffs, boaters, and outdoor enthusiast. It will be also helpful to understand how each target market can best enjoy, learn from, and become stewards of the Bayshore and each of the Discovery Zones.

1.5 Market the Discovery Zones.

In order to effectively make the Discovery Zone experience a reality and a quality one, the following actions are critical to attracting residents and visitors:

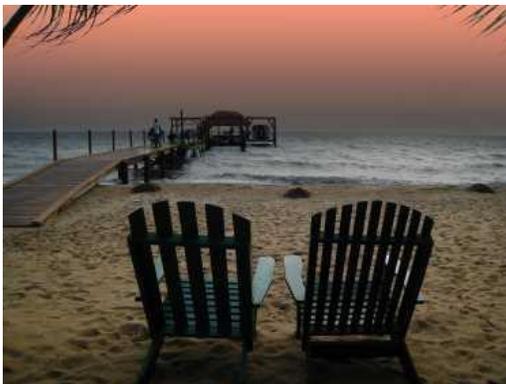
- Hire or assign a designated person to facilitate efforts for all the Discovery Zones.
- Advertise and market the Discovery Zones.
- Provide for a coordinated sign system following the principles of the MUTCD.
- Continue communication between and among the Discovery Zone Leaders and Byway Stakeholders.
- Continue to seek public and private funding sources to support the programs and marketing effort.



Design images of local architecture

1.6 Update Discovery Zone and Venue Marketing Plans

To effectively integrate the Discovery Zones and other Byway venues, it will be important that each examine any existing marketing plans and update them accordingly to align with and take advantage of the Bayshore-wide Branding and Marketing Plan. This effort can re-energize plans that may be outdated or stale, capitalize on marketing packages and stimulate an increase in visitation where desired.



Design images of eco-tourism lodging
Photo credits – www.ecotourism.org

1.7 Prepare Design Guidelines

The Bayshore is recognized for the conservation efforts that have succeeded in retaining and protecting the treasured natural and historic assets. There is a visual image of the area's character and sense of place. In order to retain the visual characteristics of the Bayshore while attracting businesses, residents and visitors, it is critical to develop guidelines for new development that is fitting and sensitive to the coastal communities and open space. Steps in this process could involve:

- Looking at and documenting design elements that reflect the local architecture and landscape;
- Examining eco-tourism best practices; and

- Developing guidance to assist in helping to define what the BMO and each Discovery Zone desire in future development patterns and design.

1.8 Construct a Bayshore Visitor Center

Strategically locate a center along the Byway to promote the Bayshore and provide amenities,



Visitor center for the Adirondack Scenic Byways, NY



Big Bear Discovery Center, Rim of the World Scenic Byway
Credit – National Scenic Byways

such as an information kiosk, exhibits, restrooms, café or restaurant, and a picnic area to promote and attract an increase in visitation. A facility of this scope does not exist and will expand a desired and necessary major visitor amenity.

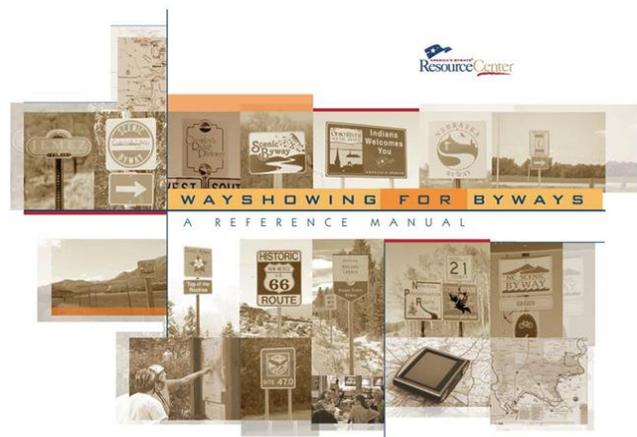
1.9 Develop Byway Gateways

There are three levels of gateways that emerged during the CMP process. Each of the following gateways may include elements of wayfinding and visual enhancements:

- Gateways that provide access to the byway from major highways (I-95 corridor at the northern end of the byway to Delaware City).
- Gateways that offer a visual cues along the byway (northern and southern ends of Route 9).
- Gateways that link the traveler to each of the Discovery Zones.



Existing entrance sign for a byway attraction – John Dickinson Plantation



Wayfinding for Byways: A Reference Manual, by David L. Dahlquist Associates. www.DDAForum.com



1.10 Implement a Byway Sign Plan

Signing and other communications directing travelers along and to the byway attractions and Discovery Zones is inconsistent or non-existent. The challenge is to develop a comprehensive way to communicate the byway story, attractions and services to visitors. This effort would have a regional component focused on the Byway and Bayshore with a local component for each Discovery Zone. It would involve all media including signing, printed materials and the web. There would be two purposes of the program: navigate and educate. Implementation involves actions under each CMP goal:

- Branding and Marketing the Bayshore and Byway
- Conserving the Natural Environment
- Supporting Community Aspiration
- Enhancing the Natural Environment
- Maintaining the Context, Safety and Character of Route 9
- Interpreting the Bayshore and Educating current and future generations
- Managing the Byway as an ongoing enterprise.

| STRATEGIES FOR GOAL 1: Brand and Market the Bayshore and the Byway | | | | |
|--|--|--|------------------|---|
| Rec. No. | Strategy Title | Description | Lead Stakeholder | Supporting Stakeholders |
| 1.1 | Marketing Brochure | Design, develop and produce a marketing brochure | BMO | DEDO, DNREC, Tourism Agencies, DNREC, Municipalities, Counties |
| 1.2 | Delaware Tourism Office's Outdoor Recreation Trail Program | Link with the Delaware Tourism Office's Outdoor Recreation Trail Program for cross promotion of the Byway and the Trails | BMO | DNREC, Coastal communities |
| 1.3 | Economic Potential Study | Estimate the economic potential of the Bayshore to understand current and future audience and marketing efforts from which to develop the Byway Branding and Marketing Plan. | DNREC | Discovery Zone Leaders, Kent County, New Castle County, DelDOT, Greater Wilmington Convention and Tourist Bureau, and Greater Dover Convention and Tourist Bureau |



| STRATEGIES FOR GOAL 1: Brand and Market the Bayshore and the Byway | | | | |
|---|--|--|---------------------------------|--|
| Rec. No. | Strategy Title | Description | Lead Stakeholder | Supporting Stakeholders |
| 1.4 | Brand Development and Marketing Plan | Positioning the Bayshore and Byway as a unique eco-tourism and heritage tourism destination within its economic potential is a second step once the tourist target market is understood. | DNREC | DNREC, Discovery Zone Leaders, Kent County, New Castle County, DeIDOT, Greater Wilmington Convention and Tourist Bureau, and Greater Dover Convention and Tourist Bureau |
| 1.5 | Market the Discovery Zones. | Position the Discovery Zones to attract residents and visitors. | BMO | DEDO, DNREC, Greater Wilmington Convention and Tourist Bureau, Kent County and Greater Dover Convention and Tourist Bureau |
| 1.6 | Discovery Zone and Venue Marketing Plans | Each Discovery Zone and venue should re-tool and update their plans to fit under the umbrella of the Bayshore-wide Branding and Marketing Plan. | Discovery Zones, Venue managers | DEDO, Greater Wilmington Convention and Tourist Bureau, Kent County and Greater Dover Convention and Tourist Bureau |
| 1.7 | Design Guidelines | Prepare guideline for eco-sensitive visitor services and amenities using global best practices as a reference | TBD | DNREC, County and local government, private developers and builders |
| 1.8 | Bayshore Visitor Center | Strategically locate a center along the Byway to promote the Bayshore and provide amenities. | TBD | Private and public partners |
| 1.9 | Bayshore Gateways | Develop a hierarchy of gateways that provide visual cues and access to the Byway, the Bayshore and the individual Discovery Zones. | BMO | DeIDOT, DNREC, Municipalities |
| 1.10 | Byway Sign Plan | Coordinate and develop a comprehensive approach to signing the entire Byway corridor. Initial signing in 2013 | BMO | Counties, Municipalities, Discovery Zones, DEDO, DHCA |

5.2.2 GOAL 2: CONSERVE THE NATURAL ENVIRONMENT

CMP ENHANCEMENT PLAN

Assuring an excellent quality Byway experience is at the heart of the Corridor Management Plan. This CMP strategy focuses on the conservation of this treasured area for generations to come – the natural environment integral with the working, historic and cultural landscapes, and scenic views. The Byway counties and local municipalities are significant partners in protecting the valuable character of their communities. Recognizing, preserving, enhancing or improving the “view from the road” is a critical element in sustaining the Bayshore character and sense of place. This strategy works toward assuring that all stakeholders understand the implications of new development on the byway landscape, which results in a commitment to find solutions to meet the challenge.

2.1 Protect the context of the Byway

The Byway counties and local municipalities are significant partners in protecting the valuable character of their communities. Recognizing, preserving, enhancing or improving the “view from the road” is a critical element in sustaining the Bayshore character and sense of place. This strategy works toward assuring that all stakeholders understand the implications of new development on the byway landscape, which results in a commitment to find solutions to meet the challenge. It is recommended that the local, county and state government agencies review how development has occurred in the Byway Corridor, determine whether the policies and regulations in place are successful in preserving the byway character and context and define best practices that can guide future decision-making.

2.2 Prepare a Scenic Conservation Plan

Preparing a Scenic Conservation Plan overlaps and aligns with each of the other strategies under Goal 2. Each strategy is recommending steps to assure that the view from the road continues to be scenic. The Scenic Conservation Plan would identify properties, if any, that may have a negative impact on the byway’s scenic qualities or are in danger of being developed within an important viewshed. This Plan would also assist with the other implementation actions to conserve the agricultural and natural environment. This CMP has already mapped the protected lands. It also provides a comprehensive understanding of the various organizations and agencies already working toward conservation. It is important for the management organization to work with and support all stakeholders in continuing their conservation efforts to maintain the byway qualities and Bayshore character. It is important that all stakeholders are involved in drafting a plan for scenic conservation. Working with current property owners has revealed most are public spirited and are supportive of the Byway. However, as private property owners, they expect their property rights to be respected. Accordingly, this action must provide avenues to solicit voluntary cooperation and benefit to the landowner within the viewshed.

2.3 Conserve the viability of the agricultural base.

The agricultural landscape along the Byway contributes to why people travel here; tells a story about the region's history; and continues to provide a livelihood for many. The CMP supports every effort to sustain farming for future generations and in doing so provides for a viable locally based economy while maintaining the beauty of the rural landscape. To improve coordination by DeIDOT, DNREC, the Delaware Department of Agriculture, and the counties involved with the farming community, a more seamless, predictable and dependable system will provide assistance and encourage farming. Arrange for agency coordination through the BMO to define specific actions for implementing the system.

2.4 Hold a Forum on Preserving the Byway Character and Context

This strategy may be a good first step toward achieving Goal 2. It presents an opportunity to bring together public and private stakeholders for a discussion that explores in greater detail implementation mechanisms to preserve the byway character. It has the potential to explore which of the CMP strategies are feasible and practical because there is support for them and the resources in place to achieve them. It also presents a forum to generate new ideas. Building and land development, utilities, bridges and signs are some of the land use and transportation elements to consider in measures that can preserve the byway character and context. This strategy should be held on a periodic basis.

2.5 Addressing Sea Level Rise

The lead agency addressing sea level rise in Delaware is DNREC and its Sea Level Rise Advisory Committee. It is recommended that the vision and goals for the Byway and Bayshore are integrated into the decision-making of the Committee. It is also important for the BMO to coordinate with and keep informed of the Committee actions. This will help to address the flooding that is becoming more common along Route 9 and along the coast. As it is anticipated that the Corridor Management Plan will result in more visitation to the Discovery Zones, the key challenge will be to manage visitation in a safe manner so as not to create an emergency situation during times of flooding. It is also imperative to assure that the qualities for which this byway was designated remain for travelers to enjoy.



| STRATEGIES FOR GOAL 2: Conserve the Natural Environment | | | | |
|---|--|---|--|--|
| Rec. No. | Strategy Title | Description | Lead Stakeholder | Supporting Stakeholders |
| 2.1 | Measures to protect the view from the road. | Use existing zoning and policies that reduce sprawl and encourage development in and near the Bayshore communities where infrastructure is already in place. | BMO | DNREC, Department of Agriculture, Delaware Wild Lands, private property owners |
| 2.2 | Scenic Conservation Plan | Work with property owners whose land includes important viewsheds and identify options for the property owner to retain land value while preserving the viewshed. | BMO, County | Property owners New Castle County Kent County DNREC Delaware Wild Lands, Local government |
| 2.3 | Intergovernmental Coordination on issues important to the agricultural community | Develop an 'ombudsman' to assist the agricultural community in dealing with multiple governmental agencies | Department of Agriculture | DNREC, DeIDOT, County Government |
| 2.4a | Hold a Forum on Preserving the Byway Character and Context. | Bring together the local, county and state government agencies to a forum to consider Byway issues and the state of the Byway and the Discovery Zones | BMO | Local, county and state agencies, Byway and Bayshore stakeholders, non-profits, private citizens. |
| 2.4b | Define Best Practices for Complete Communities | Study best practices that can guide future decision-making by government agencies and private developers. | DeIDOT, New Castle and Kent County Planning and Zoning Divisions | Local, county and state agencies, National Association of Realtors |
| 2.5 | Sea Level Rise Adaptation Plan | Monitor the actions of DNREC's Sea Level Rise Advisory Committee | DNREC, BMO | Discovery Zone Leaders State Agencies -- DNREC divisions, DeIDOT, Tourism |



5.2.3 GOAL 3: SUPPORT COMMUNITY ASPIRATIONS (COMMUNITY DISCOVERY ZONES)

CMP MARKETING, INTERPRETIVE AND ECONOMIC DEVELOPMENT PLAN

Visitors choose to travel on scenic byways for the same reasons that people choose to live in byway communities – because of a unique sense of place or identity. Route 9 connects the Bayshore communities that are vital assets to both residents and visitors. They are conceived as Discovery Zones, and include the City of New Castle, Delaware City, Port Penn, Odessa, Leipsic and Little Creek. Not only did each community grow differently, each has aspirations and plans for the future, which reflects their individual uniqueness while collectively recognizing the mutual benefits of working toward a unified brand. All of the Discovery Zone strategies are consistent with the goals and objectives of the Byway and can be found in Chapter 3. In addition, the following strategies focus on efforts to collectively support individual Discovery Zone desires.

3.1 Build Collaboration

This is an ongoing strategy to collaborate with public agencies, not-for-profit and for-profit organizations, property owners, residents and others to help meet the community aspirations in each Discovery Zone. In some cases, partnerships already exist. In other cases, new partners have been identified in planning for community desires. Each Discovery Zone should reach out to partners as actions are planned for as well as during and after implementation. Celebrating accomplishments is equally important in building trust and long lasting partnerships.

3.2 Plan for Place-sensitive Economic Development

Each Discovery Zone has some interest in attracting small business owners and individuals in developing amenities and services for residents and visitors (see Chapter 3 for specific potential programs). In part, this strategy is aligned with other CMP strategies involving protection of the byway character, compatible commercial signs, telling the story and managing the natural resources. Collectively, the BMO with the Counties, municipalities and state agencies can develop guidance to encourage development in context with the natural and historic assets of the Byway and Bayshore.

3.3 Plan for and Implement Wayfinding for each Discovery Zone

Within each Discovery Zone, the Manual of Uniform Traffic Control Devices (MUTCD) that standardizes the type, size and design of sign permits along roads and highways. There are several different alternatives for wayfinding signs. As part of a comprehensive Sign Plan, each Discovery Zone is encouraged to work with the BMO, DelDOT and DNREC to select the locations and what will work best for a given community to highlight their unique venues and characteristics. The selection of signs for each Discovery Zone will be integral to a uniform wayfinding system developed for the entire Bayshore and Byway.

Visitor services such as food, lodging and restrooms are, particularly in the rural sections, sparse or non-existent. Today, these services are found in New Castle and Delaware City. Additional

services are also available in nearby areas such as in Dover, Smyrna and Middletown. The wayfinding system should provide guidance to visitors for all services. Individual recreational

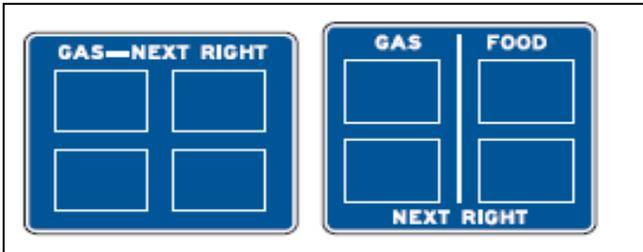


Figure 5-1: Motorist Service Signs. These signs are designed to direct motorists to traveler services off the main road.



Figure 5-2: Examples of Recreational and Cultural Interest Signs.

venues will also be signed on the Byway, roads leading to the Byway or within the Discovery Zones.

The illustrations on the next page provide guidance for the Discovery Zones. The one on the left illustrates an example of a sign that is used in areas where attractions or venues are in close proximity to one another. The second example on the right is used in areas where attractions or venues are located in different districts. In this case, each district is assigned a color and the green signs direct visitors by color to each district.

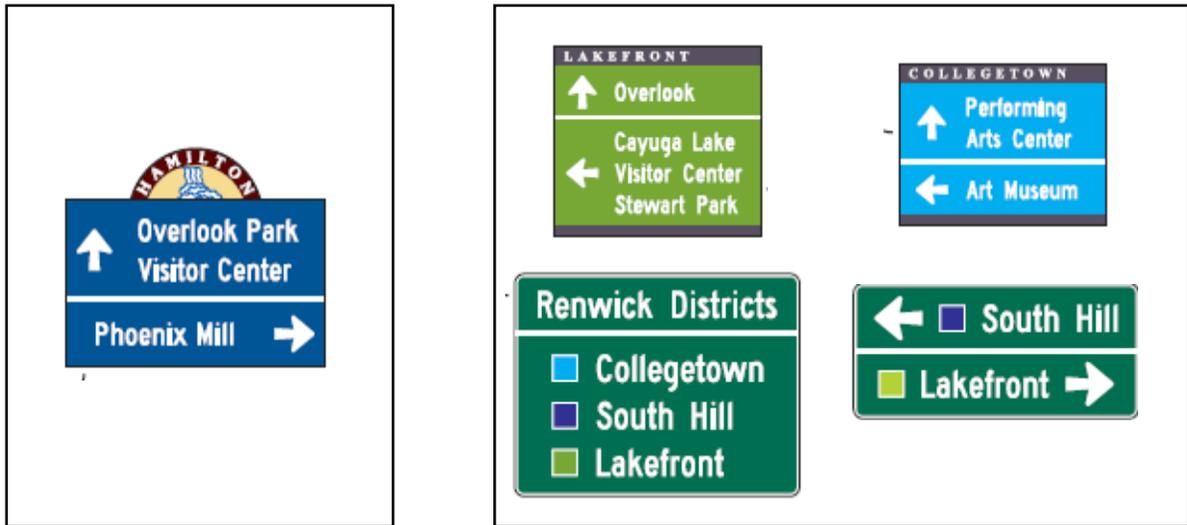


Figure 5-3: Wayfinding Signs. These signs are typically used in cities, towns and villages.

3.4 Monitor Outdoor Advertising

Because outdoor advertising or billboards are not permitted along designated State and National Scenic Byways, permits submitted to the DeIDOT will be denied. It is important, however, to monitor any permits that may be submitted outside of the byway corridor but might be visible from the byway, its attractions and Discovery Zones. The monitoring of outdoor advertising is expected to be a minimal effort but one that will require assuring that each jurisdiction and agency is aware of the byway designation and the restriction on outdoor advertising.

3.5 Address Commercial Signs

In developing a more detailed Sign Plan for the Bayshore, design guidance and local regulations are critical elements in assuring that commercial signs are place-sensitive. Factors such as location, size, color, lighting and other factors could be part of a sign ordinance for signs along the Byway in historic areas. New Castle, Delaware City and Odessa already control signing. Leipsic and Little Creek could benefit from place-sensitive signs.



| STRATEGIES FOR GOAL 3: Support Community Aspirations | | | | |
|--|--------------------------------------|--|------------------------|---|
| Rec. No. | Strategy Title | Description | Lead Stakeholder | Supporting Stakeholders |
| 3.1 | Collaborative Partnerships | Each Discovery Zone has identified partners they wish to collaborate with to achieve aspirations and goals for their community. | Discovery Zones | Varies by Discovery Zone |
| 3.2 | Place-sensitive Economic Development | The byway communities have the potential to capitalize on the existing infrastructure of these bay hamlets and towns to encourage entrepreneurial businesses through a main street approach. | Discovery Zones | Delaware Main Street, Varies by Discovery Zone |
| 3.3 | Wayfinding Signs | Examine the location and design of signs to direct visitors to services, recreational activities and other venues. | Discovery Zone Leaders | BMO, DelDOT, DNREC |
| 3.4 | Outdoor Advertising Signs | Monitor requests for permits to install outdoor advertising. | Discovery Zone leaders | Kent County Planning Department, New Castle County Department of Land Use, DelDOT |
| 3.5 | Commercial Signs/Sign Plan | Insure that applicable signing ordinances in the incorporated towns and in the unincorporated areas produce signs that are within the context of the area. | Discovery Zone leaders | Kent County Planning Department, New Castle County Department of Land Use, DelDOT |

5.2.4 GOAL 4: ENHANCE ACCESS TO AND USE OF THE NATURAL AREA DISCOVERY ZONES

DNREC manages the state-owned natural areas of the Byway and the US Fish and Wildlife Service manages Bombay Hook. Management practices in both agencies balance public access with preservation and conservation of the natural areas. In setting the balance, many factors are considered such as the ability of each to accommodate the public in a safe manner and the impact of the public on the natural area. The agencies know that public access is one way of generating support for the resources through education and recreational activities. But they also know that they must manage this access or the resource would be jeopardized. The following strategies are designed to augment the efforts of the agencies without altering the balance each strives so hard to maintain.

4.1 Execute National Scenic Byways Program Grant

This project will enhance and/or create scenic overlook areas at five sites in three state wildlife areas along the Byway. Improvements will vary based on the site conditions and the location of the facility, which could include parking areas, restrooms, walking trails, interpretation, signs and wildlife observation towers/platform. DNREC and others recognize the global recognition of the Bayshore and desire to plan for these facilities that reflect that and are appropriate to the local conditions and desires of residents and travelers. To accomplish this, undertaking a design workshop to develop these facilities is being recommended. The workshop will include with biologists, wildlife managers, architects and landscape architects and others. It will examine designs that will integrate the sea level rise challenge and reflect the natural character of the Bayshore. The result of this workshop will guide the planning, design and construction of scenic overlook areas for wildlife viewing and the supporting amenities.

4.2 - 4.8 Prepare Literature for the Public and Correlate with Signing

Both DNREC and the US Fish and Wildlife Service prepare brochures and maps of fine quality. Printed and electronic literature as well as signs that correlate to the literature will go a long way to make the resource areas more accessible.

| STRATEGIES FOR GOAL 4: Enhance the Natural Environment | | | | |
|---|-----------------------------------|---|------------------|---|
| Rec. No. | Strategy Title | Description | Lead Stakeholder | Supporting Stakeholders |
| 4.1 | Execute NSB Program Grant | Design of site facilities at various DNREC locations will enhance wildlife viewing opportunities. | DNREC | DelDOT |
| 4.2 | Guide to Bayshore Flora and Fauna | Design and production of a Bayshore guide that will engage the visitor with the Discovery Zones with a fun, informative and educational focus. (Electronic and hard copy) | DNREC | Discovery Zone Leaders |
| 4.3 | Bayshore Habitat Guides | Design and produce a Bayshore Heritage Habitat Guide. | DNREC | |
| 4.4 | Blueway Trail Guide | Design and production of a water-proof and online guide to the waterways and boating activities within the Bayshore. | DNREC | Boating industries and businesses, paddling outfitters. |



| STRATEGIES FOR GOAL 4: Enhance the Natural Environment | | | | |
|--|------------------------------|---|-----------------------------|---|
| Rec. No. | Strategy Title | Description | Lead Stakeholder | Supporting Stakeholders |
| 4.5 | Guide to Bayshore Recreation | Design and production of a Bayshore guide to recreational activities that will engage the visitor with the Discovery Zones, e.g. Lake Erie Public Access Guide. (Electronic and hard copy) | DNREC | DeIDOT, Delaware Greenways, sport clubs – fishing, hunting, hiking and bicycle, Birding clubs (Delmarva Ornithological Society, Sussex Bird Club), paddling outfitters, photography clubs, communities. |
| 4.6 | Delaware River Sojourn | Partnership opportunity to extend and participate in the annual Delaware River Sojourn in NY, PA and NJ, a paddling adventure established to heighten awareness of, and appreciation of the ecological, historical, recreational and economic significance of the Delaware River. | Tidal Delaware Water Trail | DNREC, US Fish and Wildlife – Bombay Hook, Discovery Zones Note: This is a Pennsylvania led event. It should be extended into Delaware. |
| 4.7 | Brochures | Generate a series of brochures for the nature-based Discovery Zones. | DNREC, US Fish and Wildlife | Discovery Zones, non-profits such as Delaware Nature Society, Delaware Ornithological Society, Delaware Native Plant Society, The Nature Conservancy, Delaware Wild Lands |
| 4.8 | Wayfinding Signs | Work with the BMO and DeIDOT, to identify sign locations to direct people to the Natural Area Discovery Zones | DeIDOT | BMO, DNREC, US Fish and Wildlife, Discovery Zones |

5.2.5 GOAL 5: MAINTAIN THE CONTEXT, SAFETY AND CHARACTER OF ROUTE 9

Route 9 is a state –owned roadway that links the community of the Delaware Bayshore together. It is a series of roadways designed and built at different times to different design standards in effect at that time. The net result is a roadway with different cross sections and utility. Yet, for its differences, it is relatively congestion free and operates fairly safely. However, it must provide safe and efficient service to its users, within the context of the Byway character, which includes the landscape of the Bayshore but



with a focus on the transportation network. Context is a key factor in all future planning for the Byway as “the road less traveled”. Accommodating all users within the byway corridor is not only a requirement of the Byways Program but a desired intent of this goal. The users of the Byway include residents and businesses, farmers and waterman. But also included are recreational users such as birders, anglers, hunters, kayakers, sight-seers and folks that just want to experience the road less traveled. Byway planning must accommodate:

- All motorized vehicles that travel on Route 9 from automobiles to trucks to farm equipment
- Cyclists that use Route 9
- Pedestrians that want to access Route 9 and the byway-wide attractions; and
- Boaters that use the waterways.

5.1 Implement Context Sensitive Design

The context of Route 9 needs to adhere to and embrace the vision of the byway as ‘the road less traveled’. It should not be designed to accommodate interstate traffic; Route 1 serves that need. Nor should it be designed for commercial traffic other than the commercial traffic destined for the farms and businesses along its route. Sections of Route 9 contain shoulders and have an improved alignment. Except to correct for safety deficiencies, little improvement is required.

However, about half of the length of the Byway consists of a road without shoulders, with some of those sections having a drainage ditch or a drop-off to wetlands or coastal flood zone immediately adjacent to the travel lane, sometimes protected by guardrail, sometimes guardrail is not warranted. This cross section is not forgiving and conducive for the movement of farm equipment or bicyclists. Accordingly, this Plan recommends a minimum cross section for Route 9 where no shoulders currently exist. Figure 5-4 illustrates the cross section. The figure depicts marshland on the left and a farmed field on the right. It also shows a turf shoulder on both sides of the roadway. The turf shoulder retains the context of the existing roadway, making it more forgiving for errant vehicles and enables farm equipment to travel with one wheel on the turf and one on the pavement without encroaching on the left side of the double yellow line. The minimum width of travel lane is recommended to be 10 feet.

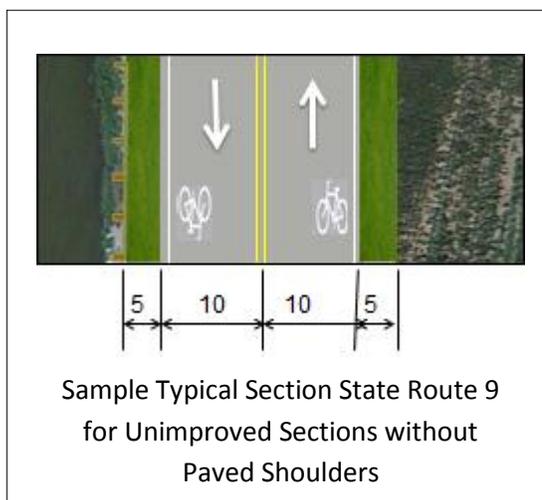


Figure 5-4: Proposed Context Sensitive Section
Note: Bicycle symbol denotes a shared lane in which bicycles share a lane with motorized vehicles and in this case does not denote a pavement marking.

Ornamental traffic signal and highway lighting poles, when warranted, should be of the ornamental type in the towns and villages.

5.2 Plan for Bicycles

The bicyclists using Route 9 are, by and large, experienced and know how to share the road with vehicles. They typically are used to bicycling longer distances and at higher speeds than the less experienced bicyclists. But families and less experienced bicyclists should be encouraged to bring their bicycles to the Discovery Zones and along the trails of the Discovery Zones. Improvements to the trail system should focus on linking the Discovery Zones and their attractions, and providing for bicycle friendly facilities for the less experienced cyclists.

As noted in Figure 5-4, bicyclists will share the travel lane with vehicles for about half of the length of the Byway. In locations where vehicles might not expect bicycles, share the road signs would be a reminder to both modes of travel to be on guard.

5.3 Plan for Transit Service/Tour Buses

While the City of New Castle has some public transit service (Routes 15, 27) and a route comes close to Delaware City (Route 25), there is very little transit service. However, tour buses could be expected to increase in the future as the Discovery Zones step up their activity levels. The City of New Castle has the makings of a bus plan and is providing for tour bus parking. Delaware City's streets and municipal parking areas provide for bus operations. Bombay Hook provides for buses. Odessa, Leipsic and Little Creek can accommodate bus movement along Route 9 and Route 299. The John Dickinson Plantation accommodates buses. DNREC's wildlife areas are not currently accessible to tour buses. Wildlife area facilities are not built to accommodate tour bus traffic. Tour bus traffic would create disturbance to the natural environment and to wildlife, and there are safety issues when wildlife areas are open to hunting at certain times of the year.

5.4 Develop Pull-Off Areas

As previously noted, pull-off areas for birding, fishing and enjoying the view are strongly recommended for implementation. A byway-wide plan for defining future locations for scenic overlooks and recreational pull-off areas needs to be developed. Locations should be examined where scenic views, fishing areas and birding viewing areas have been identified. Wherever possible they should be located on publicly owned land to avoid conflict with private property owners.



Route 9 North of Port Penn. Note the ‘unofficial pull-off area in the foreground in the picture on the left and the parked vehicle in the background in the picture on the right. Strategically placed pull-off areas would be a benefit to anglers, birders and photographers.

Locations might include bridges north of Port Penn and near Old Flemings Road, as well as near the John Dickinson Plantation.

There are many basic pull-off area designs. Figure 5-5 illustrates the elements of a full-service pull-off area. In some cases, a smaller pull-off area, similar to a bus stop in a suburban area or simply a wider shoulder is all that is needed.

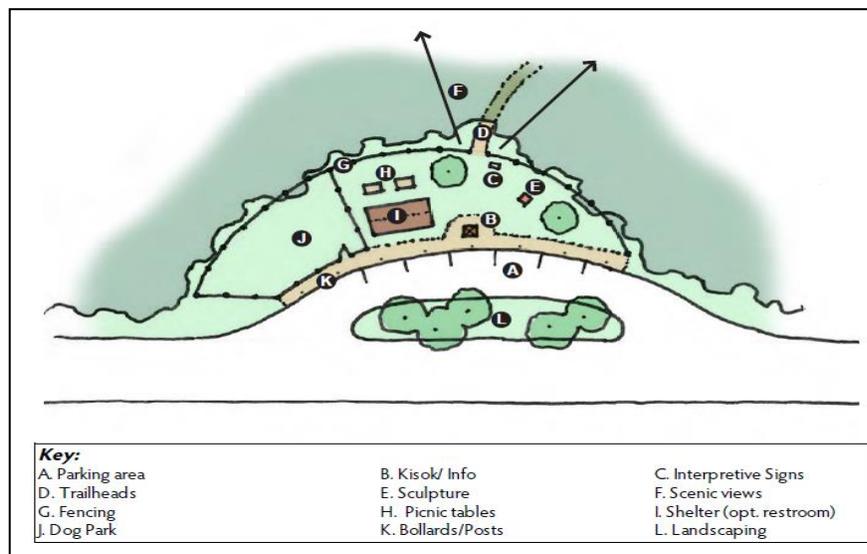


Figure 5-5: Elements of a Scenic Pull Off area.
Source: Green Mountain Byway, Vermont, Resource Systems Group.

5.6 Accommodate Fishing

Fishing from the bridges along Route 9 is a longstanding tradition and part of the byway charm. DelDOT has responded to this tradition by providing a walkway on bridges that they reconstruct. There are several structures that do not have walkways. The Plan recommends that a typical

section for bridges along Route 9 be established to accommodate a walkway, safe access to the bridge and parking. This should be coordinated with locating pull-off areas for scenic and wildlife viewing – there are opportunities to combine them together and minimize the cost of construction and paved surfaces, and effectively design them in a unified and comprehensive fashion.

For structures that have been reconstructed without a walkway like Taylors Bridge and the bridge over the Leipsic River, a separate pedestrian walkway should be designed and constructed.



Bridge on Route 9 over Smyrna River and aerial view of Smyrna River

5.7 Wayfinding Sign Plan

It is important that there be coordination among the Discovery Zones, DelDOT and the visitor and tourism industry in deciding sign messaging, what to sign and sign placement. This sign-planning effort will assure that signs are minimized to avoid clutter while providing for an attractive and informative system. Within each Discovery Zone and along Route 9, there are few signs and what is present is inconsistent. There are three types of signs that need to be planned:

1. Wayfinding within each Discovery Zone. This effort would be locally led and be geared to the venues within each Discovery Zone.
2. Wayfinding over the entire Byway Corridor leading to each Discovery Zone and the major venues in between.
3. Byway signing to denote the route of the Byway.

In addition to Discovery Zone signs, the Wayfinding Plan should integrate directional signs to be located on major highways and roads outside of the Byway and Bayshore, and along the Route 9 Byway. The purpose of this signing is to direct visitors to the Byway and Bayshore. These signs are generally found in Chapter 2L of the Manual on Uniform Traffic Control Devices (MUTCD) and have a brown background with white letters. They could also have the Byway logo or a Bayshore logo if one is developed. If both logos are desired, they could be provided on auxiliary

sign panels. Along the Byway, the brown and white signing is recommended to continue for each Discovery Zone.

A priority action of the Sign Plan is to define the locations for the placement of the Delaware byway signs on the Byway route. Coordination by the BMO with DeIDOT is essential in identifying locations and sign type along with fabrication and installation of them.

5.8 Routine DeIDOT Actions

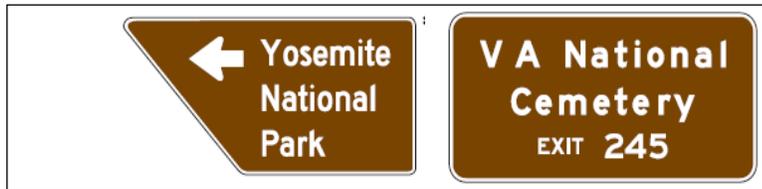


Figure 5-6: Attraction Signing. These signs would be used along Route 9 and the roads leading to the attractions.



Figure 5.7: Byway Signing

From time to time, DeIDOT offices are presented with requests for approvals by private or quasi-public entities such as utility companies.

- Access permits: There are a number of un-acted upon developments or newly proposed developments that, if renewed, would necessitate a driveway access review. The currently used access design standards should be adapted to the context of the Byway. Currently, there is only one set of standards approved for statewide use and the



standards are applied fairly uniformly. Driveways, like intersecting public roadways need to be context sensitive and designed in accordance with the DeIDOT publication, *Context Sensitive Solutions for Delaware Byways*.

- **Utility Permits:** Utilities have a right to use public roadway rights of way to run their facilities. Routing the utilities along the Byway is a foregone conclusion. However, the utility companies should work with DeIDOT to develop routes that avoid the Byway and when not possible, utilize facility designs that are underground. As a last resort, make their appearance as context sensitive as possible. For example, north of Leipsic, a run of power poles was installed. The design of the poles is not sensitive to the viewsheds in the area.

| STRATEGIES FOR GOAL 5: Maintain the Context, Safety and Character of Route 9 | | | | |
|--|--------------------------|---|------------------|---|
| Rec. No. | Title | Description | Lead Stakeholder | Supporting Stakeholders |
| 5.1 | Context Sensitive Design | Develop and implement a standard typical section for the unimproved section of Route 9. | DeIDOT | DNREC (environmental permitting) |
| 5.2 | Bicycles | Provide signing and pavement markings for bicycles in accordance with DeIDOT standards. | DeIDOT | Delaware Bicycle Council, Bike Delaware, DNREC |
| 5.3a | Bus Planning (1) | Monitor for the need to provide scheduled transit services | DART | Discovery Zones, DeIDOT |
| 5.3b | Bus Planning (2) | Upgrade provisions for charter buses in the Discovery Zones | Discovery Zones | Greater Wilmington Convention and Tourist Bureau, and Greater Dover Convention and Tourist Bureau |
| 5.4 | Pull Off Areas | Provide pull off areas for birding, observing wildlife and general scenic viewing. Develop design standards for pull off areas. | DeIDOT | DNREC, Discovery Zones |
| 5.5 | Fishing from bridges | Accommodate fishing from the Route 9 bridges by constructing separate walkways and parking areas where needed. | DeIDOT | DNREC, Discovery Zones |



| STRATEGIES FOR GOAL 5: Maintain the Context, Safety and Character of Route 9 | | | | |
|--|---|--|------------------------|---|
| 5.6 | Pull-off Areas for Fishing | Examine locations for pull-out areas and fishing spots to strategically define where they should best be located, what the purpose of the pull-out is, and how they are distributed along the byway. | BMO DNREC DelDOT | Discovery Zone Leaders, Utility Companies, property owners |
| 5.7 | Wayfinding and Visitors Service Signing | Develop a signing plan for the Bayshore, Byway and each Discovery Zone | DelDOT DNREC BMO | Greater Wilmington Convention and Tourist Bureau, and Greater Dover Convention and Tourist Bureau DNREC, Statewide Tourism, Kent County Tourism, Discovery Zones |
| 5.8 | Permitting along Route 9 | Work with and monitor permits that could improve access or impact the quality of the view from the road. | DelDOT | Counties, Municipalities, Discovery Zones |

5.2.6: GOAL 6: INTERPRETING THE BAYSHORE BYWAY AND EDUCATING PRESENT AND FUTURE GENERATIONS

CMP INTERPRETIVE PLAN

The Bayshore and the Byway are initiatives that not only have the support of all levels of government; each has the support of Delawareans of all walks of life. Generations of Delawareans who have come before us have done yeoman’s work to preserve the Bayshore and look to this generation and future generations to do their share. The only way to continue this legacy is to pass this legacy down to future generations through education and continued interpretation of the area’s intrinsic values, both cultural and natural.

Telling the story of the Bayshore’s ecology is fundamental for helping Byway visitors understand our human connection with nature and the vibrant reasons for protecting the land and water of the estuary. Explaining how the inhabitants of yesteryear made a living from the water and how some commercial watermen still do today are essential chapters in the story. Even the story of the agricultural community is an important element of the story. Understanding why farmers grow the crops that they do and how they did so in harmony with nature in the past and still do so today is vital to appreciating the economic value of the area and character of the landscape and its inhabitants. Today, the Bayshore is a laboratory

that teaches the power of nature through sea level rise, coastal storms and how we attempt to manage a coastline that is rapidly changing. The ways nature sustains us and why we should respect this place is the principal story of the Bayshore Byway.

Telling the story of the Bayshore's cultural history is also compelling and is integral to preserving our past as well as guiding a future vision for the area. The story of conservation champions like Governor Russell W. Peterson, Ted Harvey and others who made a difference in preserving the Bayshore is essential to understanding the significance of the landscape today. Sharing and promoting the roles of Caesar Rodney and John Dickinson in our nation's history is also vital to understanding the significant contribution of those who lived and worked in the Bayshore's past. Interpreting the story of places like New Castle and military installations near Delaware City help to preserve not only the Bayshore's history but also our nation's past.

To raise awareness and reinforce and promote the area's significant natural and cultural history, these stories and themes should be linked together through the Bayshore's education and visitor centers and the programming they offer for school groups and the general public; training workshops offered for teachers and other professionals; interpretive signs and kiosks placed strategically at areas easily accessible by Byway travelers; and printed and through digital media available at key distribution locations and online. Bombay Hook National Wildlife Refuge, Delaware National Estuarine Research Reserve (DNERRR), Aquatic Resources Education Center (AREC), John Dickinson Plantation and Delaware's State Parks all offer places to begin Byway-wide coordination and collaboration on telling the stories of the Bayshore Byway.

6.1 Telling the story.

Compile and develop information about the Bayshore's ecology and culture, past and present, and integrate this information into a more detailed interpretive plan that can be adopted by education, interpretive and visitor centers and wayside areas throughout the Bayshore Byway. To make the story come alive, it is essential to capture oral histories and personal accounts as part of information gathering. Oral histories are powerful ways to communicate a story because people identify with the stories and experiences told by others. Information developed for the Bayshore Byway can be organized across the area overall and by Discovery Zone. Materials promoting the Bayshore Byway story can be distributed by existing education and visitor centers locally and throughout the region.

6.2 Inventory education, outreach and awareness programs and materials.

As part of "telling the story" and developing an interpretive plan, gather and review existing education, outreach and awareness programs and materials to consider ways to enhance these resources; identify ways to bring consistency among key messages for the general public, lesson plans for school groups and training workshops; identify gaps in information; and recommend the development of new programs and materials. Materials that should be part of the inventory are those developed by, but not limited to, DNREC's Division of Fish and Wildlife (AREC), Division

of Parks and Recreation (Ft. Delaware and Ft. DuPont State Parks, Port Penn Interpretive Center) and DNERR (Blackbird Creek and St. Jones Reserve), U.S. Fish and Wildlife Service (Bombay Hook National Wildlife Refuge), Delaware Division of Historical and Cultural Affairs (John Dickinson), and the Partnership for the Delaware Estuary. Examples of existing initiatives that can be evaluated for opportunities to advance Bayshore Byway outreach and awareness include “Delaware Children in Nature/No Child Left Inside”, “Thank You Delaware Bay” and “Celebrate Delaware Bay”.

Though incorporating new elements into school curriculum is very difficult, it is possible to identify ways to align Bayshore field and classroom programs and materials for school children to the K-12 state education content standards, as the education center programs described below are doing. Teacher-training workshops offered by Bayshore education centers could also consider incorporating additional or new elements of Bayshore ecology, culture and history.

6.3 Expand and enhance capacity of existing education and visitor centers.

Existing education centers located throughout the Bayshore Byway in a number of the Discovery Zones offer an opportunity to build upon resources these facilities offer and enhance these sites as sources of information for the Bayshore. Existing facilities that are currently visited by the general public, school groups, teachers, tour groups, community groups and / or decision makers include Fort Delaware State Park, Port Penn Interpretive Center, Aquatic Resources Education Center, Blackbird Creek Reserve, Bombay Hook National Wildlife Refuge, John Dickinson Plantation, Air Mobility Museum, and the St. Jones Reserve. Each is described below and can serve as a baseline upon which to build an enhanced Bayshore Byway visitor experience.

Fort Delaware State Park offers a ½ -mile ferry ride from Delaware City to the fort on Pea Patch Island. A jitney provides transport from the island dock to the granite and brick fortress. Costumed interpreters take visitors back to the summer of 1864. A variety of daily programs are offered for the general public visiting the fort. School programs focus on Civil War history and Delaware's role in the conflict. Students explore the fort, its rooms and its artifacts, and meet costumed history interpreters who show what it was like to live and work in a 19th-century military prison. Park Staff teaches hands-on history, offering field trips and outreach programs for grades 2-12 that relate to Delaware's History Content Standards. A short self-guided trail on Pea Patch Island allows visitors to view wildlife and wading birds that nest on the island. Additional interpretive signs are available along Delaware City's promenade and other interpretive information is available at the State Park gift shop in Delaware City.

The Port Penn Interpretive Center operated by State Parks is located on Routes 9 a few miles south of Delaware City. The Center offers displays and programs that explain the folk life of the historic wetland communities along the shores of the Delaware. Programs and self-guided

walking tours, with interpretive signs, feature the historic homes of Port Penn and the scenic marshlands surrounding the town.

Delaware National Estuarine Research Reserve offers educational programs for K-16 school groups, the general public, communities, teachers, and coastal decision-makers. Components of the education program include student curricula, field trips, outreach programs, teacher professional development, volunteer programs, community and public programming, coastal decision maker workshops, and a wide variety of printed and social media. All education, training, and outreach activities are designed to enhance public awareness of the importance of coastal and estuarine systems and provide opportunities for public education and interpretation. The Reserve 2013-2018 Management plan includes priority visitor facility enhancements for the St. Jones Reserve and the Blackbird Creek Reserve.

The **Aquatic Resources Education Center (AREC)** facility is located in the scenic Woodland Beach Wildlife Area bordering Delaware Bay, and features day-conference facilities and overnight use in a rustic 40-bed lodge. The site includes a 940-foot saltmarsh boardwalk, the outdoor classroom, and nature trails linking salt marsh, fresh and brackish ponds, swamps and vernal pool wetland habitats. Canoes, fishing tackle, nets, water monitoring equipment, and field activity kits are available for loan to educators using the facilities. The AREC staff provides ongoing training and teaches "in-service" workshops in wetlands and environmental education. The AREC facilities are available for use by public/private school groups, youth groups, conservation organizations, non-profit organizations, and government agencies – with educators who conduct Aquatic Education programming receiving scheduling priority. The AREC offers a wide array of programs including Wetland Activities for Delaware Educators, Tri-State Horseshoe Crab/Shorebird Education, Eco-Explorers Programs, Delaware Adopt-A-Wetland, Horseshoe Crabs in the Classroom, Children in Nature Link, Fishing Programs, and Becoming an Outdoors Woman.

Bombay Hook National Wildlife Refuge offers a variety of hands-on nature studies for grades 1-12, allowing students to experience the several habitats on the refuge from tidal salt marsh to freshwater impoundments, upland fields, and forests. Habitat study lesson plans relate to Delaware Science Content Standards. The refuge also offers visitors a 12-mile wildlife drive, five walking trails (2 handicapped accessible), three observation towers, wildlife photography, hunting opportunities, a variety of nature and educational programs, and interpretative displays. The wildlife drive is open from sunrise to sunset daily. The visitor center is open weekdays from 8:00 a.m. to 4:00 p.m. year round. During spring and fall weekends, the visitor center is open Saturday and Sunday from 9:00 a.m. to 5:00 p.m. The visitor center is handicapped accessible and has educational displays and videos.

The **John Dickinson Plantation** offers tours of the plantation using a technique known as character interpretation in which trained historic interpreters depict characters from John Dickinson's era. Character-interpreted tours enable visitors to compare and contrast lifestyles of

the wealthy Dickinson family with those of tenants, poor whites, slaves, and free blacks residing in Kent County during the 1700s and early 1800s. Tours and other interpretive programs take place throughout normal operating hours, but tour groups and school groups schedule in advance for programs or special demonstrations. Several program options are available and school group tours for K-12 complement Delaware's Social Studies Content Standards.

6.4 Improve mobile phone and internet access and associated apps and podcasts.

Mobile phone and internet services are inadequate along several areas of the Bayshore Byway, and yet these services offer a critical way to expand access to information. Improved opportunities to use apps and other electronic tools are needed to tell Discovery Zone stories, and provide information about the Discovery Zone attractions and services. To maximize the capacity of these technologies to deliver real-time information about the Byway, address gaps in cell service. For travelers and other visitors that plan ahead, provide access to podcasts that can be downloaded before entering poor cell-service areas; up-to-date podcasts can help interpret information about attractions and amenities available, and assist Byway travelers with navigation to and from the Byway and within and among Discovery Zones.

6.5 Develop and install a system of interpretive kiosks and signs.

To link the Discovery Zones, together with a consistent story for the Byway traveler, general public and tour or school groups, develop and install a system of interpretive kiosks and signs



Kiosk at the entrance to Boardwalk Trail at Bombay Hook National Wildlife Refuge



One of a number of interpretive panels in Delaware City

that includes outdoor interpretive areas to engage Byway visitors at education and visitor centers, wayside areas, along trails, at historic sites or while boating and paddling the Bayshore waterways. Developing consistent information for interpretive kiosks and signs along the



Bayshore Byway will help unfold the Bayshore story describing the important natural and cultural features in each of the Discovery Zones.

| STRATEGIES FOR GOAL 6: Interpreting the Bayshore Byway and Educating Present and Future Generations | | | | |
|---|---|---|------------------|--|
| Rec. No. | Title | Description | Lead Stakeholder | Supporting Stakeholders |
| 6.1 | Telling the story | Develop the Bayshore Byway story, including gathering and documenting oral histories. | BMO | DNREC's Division of Fish and Wildlife, Division of Parks and Recreation, DNERR, USFWS, Delaware Division of Historical and Cultural Affairs, Delaware Wild Lands, Partnership for the Delaware Estuary, DuPont Clear Into the Future, Manomet Center for Conservation Sciences (Celebrate Delaware Bay), and Discovery Zone Leaders. |
| 6.2 | Inventory Education, Outreach and Awareness Materials | Gather and review existing resources, identify ways to enhance them, identify gaps in information and resources, and recommend the development of new programs and materials. Align Bayshore field and classroom programs and materials for school children to the K-12 state education content standards | BMO | DNREC's Division of Fish and Wildlife, Division of Parks and Recreation, DNERR, USFWS, Delaware Division of Historical and Cultural Affairs, Partnership for the Delaware Estuary, and Discovery Zone Leaders. |



| STRATEGIES FOR GOAL 6: Interpreting the Bayshore Byway and Educating Present and Future Generations | | | | |
|---|--|---|--|--|
| Rec. No. | Title | Description | Lead Stakeholder | Supporting Stakeholders |
| 6.3 | Expand and enhance capacity of existing education and visitor centers. | Build upon existing facilities by expanding and enhancing information and programming offered to include Bayshore Byway interpretation. | DNREC, USFWS and DE Division of Historical and Cultural Affairs. | DNREC’s Division of Fish and Wildlife, Division of Parks and Recreation, DNERR, USFWS, Delaware Division of Historical and Cultural Affairs, Delaware Department of Education, Partnership for the Delaware Estuary, DuPont Clear Into the Future, and Discovery Zone Leaders. |
| 6.4 | Improve mobile phone and internet access and associated apps and podcasts. | Address inadequate mobile phone and internet service, and develop app and podcast information to improve navigation and interpretive information available on-the-go. | BMO | DNREC’s Division of Fish and Wildlife, Division of Parks and Recreation, DNERR, USFWS, Delaware Division of Historical and Cultural Affairs, Delaware Wild Lands, Partnership for the Delaware Estuary, Manomet Center for Conservation Sciences (Celebrate Delaware Bay), and Discovery Zone Leaders. |
| 6.5 | Develop and install a system of interpretive kiosks and signs. | Design and install kiosks and signs throughout Bayshore Byway at the Discovery Zones to interpret the Bayshore story for residents and visitors. | DNREC, USFWS and DE Division of Historical and Cultural Affairs. | DNREC’s Division of Fish and Wildlife, Division of Parks and Recreation, DNERR, USFWS, Delaware Division of Historical and Cultural Affairs, Delaware Wild Lands, Partnership for the Delaware Estuary, Manomet Center for Conservation Sciences (Celebrate Delaware Bay), and Discovery Zone Leaders. |

5.2.7 GOAL 7: MANAGE THE BYWAY

CMP PUBLIC PARTICIPATION PLAN

Through the dedication, commitment and involvement of the Planning Advisory Committee, the staff at the DeIDOT, DNREC and DEDO, and the residents and businesses along the Route 9 corridor, this Corridor Management Plan lays out the roadmap for the Byway to be a success. This CMP applauds the work to date but recognizes the importance of establishing a BMO/Team as the structure to implement the CMP. The “real” work begins now that the planning is done.

All public and private stakeholders including the Discovery Zone leaders, State Agencies and others need to engage in sustaining the Bayshore for future generations. The success of the byway rests on the partnerships and collaboration that are critical to securing the technical assistance and funds necessary to implement the CMP action plan. Since there are no regulatory powers other than the prohibition on outdoor advertising, this CMP is the planning tool for:

- Preserving the qualities that make it a special place;
- Enhancing the traveler experience for all ages;
- Assuring safe travel for all users;
- Creating incentives for economic development opportunities; and
- Managing implementation to meet the collective vision for the region.

The following strategies provide the guidance for managing this Byway over time. Every byway requires and needs an organizational structure to successfully achieve the vision as set forth in this CMP. The Byways around the nation are all unique in their own ways and the Delaware Bayshore Byway is no exception. With 50% of the land along the byway in public ownership, much of the corridor is a living natural laboratory with unique cities and towns along the route, and many varied interests among the populace. Managing the Byway could be a difficult task. Fortunately, through the auspices of this CMP, the 10 Discovery Zones and the governmental agencies involved in and committed to the Bayshore and the Byway are poised to meet the challenge ahead.

7.1 Establish a BMO

The purpose of the BMO is to have the responsibility and authority to implement the Byway's Corridor Management Plan including:

- Administering, managing, advocating for, and seeking financial resources for implementation of the approved CMP actions for the improvement and protection of the Byway.
- Making recommendations and disbursing information to plan for and educate its members on the development of this Byway in accordance with the purposes and limitations as set forth in the Delaware Byways Scenic and Historic Highways Program Guide and Title 17, Chapter 1, Subchapter VI. Delaware Byways Program.

Establishing the BMO may prove to be more difficult without the funding from the National Scenic Byways Program, which previously awarded grants for getting started. However, there is strong interest by the PAC to work toward implementing the CMP and evolving into an organization that will best meet the needs of the stakeholders. Funds may be necessary to support a part or full time staff person to administer the organization and more forward the CMP. This is critical for the byway to be a success.

7.2 Secure needed funding

The Discovery Zones and the BMO will require technical assistance or funding to move their planning initiatives forward. However, funding is always a challenge and creative financing is essential. It is critical to seek assistance from many – government grant programs, public and private supporters, private foundations and businesses along the byway. In addition, the significant amount of public lands within the Bayshore presents both an opportunity and a challenge at this time to find ways to develop, implement, and manage their assets. This might involve protecting the resources, addressing flooding and improving recreational and interpretative facilities. Finding opportunities to generate revenue for operations and management of all the public facilities needs to be further explored throughout the Byway Corridor.

7.3 Building regional and multi-area programs and partnerships

The Planning Advisory Committee and ultimately the BMO is the organization to build on existing partnerships and find new partnerships to benefit the byway traveler and resources. This ongoing effort requires not just identifying potential partners but involves educating them about the byway, generating enthusiasm for their involvement as mutually beneficial. Throughout the Corridor Management Plan are references to the wealth of organizations in which the BMO can build partnerships.

In partnership with other organizations, integrate and build a number of current programs that already draw residents and visitors to explore, learn about and enjoy the Byway and Bayshore natural, recreational, historic and cultural resources and activities. These programs include, among others:

- Delaware Birding Trail Map and Guide
- Thank You Delaware Bay
- Coastal Cleanup
- Delaware Geocaching Trail
- Delaware History Trail
- Historical Markers Program
- National Public Lands Day

- National Estuaries Day
- Tourism draws, such as those in the St. Jones Neck Discovery Zone
 - Dover Air Force Base Air Show
 - NASCAR races
 - Firefly Music Festival
 - Dover Days
- EcoDelaware sponsored by the Partnership for the Delaware Estuary and Delaware Tourism

Southern Extension of the Byway: Another potential effort is with those interested in extending Delaware's Bayshore Byway south to Lewes. This extension travels through the remaining area of the DNREC's Bayshore Initiative and logically continues a route to significant natural areas, such as, Milford Neck, Slaughter Beach and Prime Hook National Wildlife Refuge, Milford, Milton and Lewes. The extension also presents an opportunity for a multi-state byway with New Jersey's Bayshore Heritage Byway across the Delaware River and Bay at the Cape May-Lewes Ferry in Lewes, DE.

7.4 Forming a collaborative partnership with state and federal agencies.

- **Multi-modal transportation system.**

Work with DeIDOT, DNREC, and Delaware State Parks, among other national and local stakeholders to undertake plans, design and construction of multi-modal facilities, as appropriate.

1. Complete a system of safe bicycle travel on and within the Byway Corridor.
2. Assure safe and accessible parking and facilities for fishing and crabbing at various bridge locations along the byway.
3. Provide areas for birding and observation of wildlife and scenery at optimum locations along and within the publicly owned lands.
4. Expand upon recreational activities to take advantage of the Byway's access to water including tour boat trips from Delaware City, and possibly on the Leipsic River, canoe and kayak put-in areas, and possible boat slips, ramps and piers.

- **Context Sensitive Solutions.**

With DeIDOT and the Federal Highway Administration, develop context sensitive solutions for all planned and proposed roadway improvements, including safety improvements and maintenance operations in accordance with the DeIDOT publication, *Context Sensitive Solutions for Delaware Byways*.

- Insure that the standards provide for bicycles and the movement of farm equipment. Within the built-up areas, provide for safe pedestrian movement.
- Develop context sensitive standards for bridges along the Byway.
- **Seal Level Rise, Flooding and drainage.**

Participate in ongoing efforts to plan for and implement actions to reduce Delaware’s future vulnerability to the effects of sea level rise with the Delaware Coastal Program and others. The Compendium of Sea Level Rise Initiative Projects is intended to evolve over time recognizing that many other agencies will be essential.

Develop an understanding relative to the management of drainage along the Byway, especially in flood plain and wetland areas with appropriate agencies and stakeholders. Special consideration is also appropriate in situations where wetlands and floodplains are directly adjacent to the edge of the travel lanes. A typical road cross-section should be developed where the road is the narrowest as a joint DelDOT/DNREC effort. A programmatic environmental permit process should be developed to permit minor improvements to achieve that typical section to be permitted easily.

| STATEGIES FOR GOAL 7: Manage the Byway | | | | |
|--|-------------------------|---|---------------------------------|--|
| Rec. No. | Title | Description | Lead Stakeholder | Supporting Stakeholders |
| 7.1 | BMO | Establish a permanent organization to manage the byway and implement the CMP. | Planning Advisory Committee | Byway and Bayshore Stakeholders |
| 7.2 | Financing and funding | Ongoing effort to secure public and private funds and financing options to implement the CMP actions. | Planning Advisory Committee/BMO | Discovery Zone Leaders State Agencies -- DNREC divisions, DelDOT, Division of Tourism, Counties, Municipalities |
| 7.3 | Regional Programs | Ongoing effort to incorporate the byway and Bayshore with regional initiatives and programs. | Planning Advisory Committee/BMO | Organizations and agencies |
| 7.4 | Government Partnerships | Ongoing efforts to collaborate with state and federal government. | Planning Advisory Committee/BMO | Local, State and Federal Agencies |

APPENDIX

| APPENDIX | TITLE | PAGE NO. |
|----------|---|----------|
| 1 | Nomination Document | A-1 |
| 2 | Name Change Approval..... | A-3 |
| 3 | Detailed Maps of Delaware's Bayshore Byway..... | A-7 |
| 4 | Institutional Survey of Significant Planning Documents..... | A-29 |



Delaware's Bayshore Byway APPENDIX



APPENDIX 1

NOMINATION DOCUMENT

In 2007, the Nomination Document for the Route 9 Coastal Heritage Scenic Byway was submitted to DelDOT to be designated as a Delaware Scenic and Historic Highway. The nomination document is appended to this Corridor Management Plan as it provides supplemental information germane to the management plan. In particular, the document includes a detailed listing of historical and cultural resources.

The Nomination Document is available on the website of Delaware Greenways, www.delawaregreenways.org or by contacting Delaware Greenways directly at 302-655-7275 or by email at greenways@delawaregreenways.org.



APPENDIX 2

NAME CHANGE APPROVAL

On June 4, 2013 at their meeting, the Planning Advisory Committee recommended to the Secretary of Transportation that the name of the Byway be changed from the Route 9 Coastal Heritage Byway to Delaware's Bayshore Byway. The following excerpt from the minutes of that meeting describe the reasons:

"Byway Name Change

- a. *Because of the potential extensions of the Byway to Lewes and to New Jersey, the relationship of the Byway to Delaware's Bayshore Initiative and the concept of the Discovery Zones, a discussion ensued whether it would be appropriate to change the name of the Byway from the Route 9 Coastal Heritage Byway to another name.*
- b. *The candidate names follow (no other names were considered):*
 - i. *Delaware's Bayshore Byway*
 - ii. *Delaware's Bayshore Heritage Byway*
 - iii. *The Bayshore Byway*
 - iv. *The Route 9 Bayshore Byway*
- c. *After some discussion, changing the name to Delaware's Bayshore Byway was put into a motion by Cindy Small. The motion passed unanimously.*

Ann Gravatt will ensure that this change is properly communicated in DelDOT."

The approval of the Secretary of Transportation follows.





STATE OF DELAWARE
DEPARTMENT OF TRANSPORTATION
800 BAY ROAD
P.O. Box 778
DOVER, DELAWARE 19903

SHAILEN P. BHATT
SECRETARY

MEMORANDUM

TO: Shailen Bhatt, Secretary

VIA: Drew A. Boyce, Director of Planning *DAB*

VIA: Bobbie Geier, Assistant Director of Planning *BG*

FROM: Ann Gravatt, Byways Coordinator *AG*

DATE: June 11, 2013

SUBJECT: **Route 9 Coastal Heritage Byway**
Name change approval to Delaware's Bayshore Byway

On behalf of the Route 9 Coastal Heritage Byway Project Advisory Committee (PAC) and with concurrence from FHWA, we are submitting for approval a formal name change of the byway to *Delaware's Bayshore Byway*. A unanimous vote on the name change was made at the last PAC meeting held on June 4, 2013. Prior to the vote, the name change was subjected to a public review process.

The new name will be used for the Final Corridor Management Plan, due at the end of summer.

APPROVED:

Shailen Bhatt, Secretary

Date

6/20/13

AG: lc
Enclosure

cc: Advisory Board Members
Nick Blendy, FHWA





Delaware's Bayshore Byway APPENDIX



APPENDIX 3

DETAILED MAPS OF DELAWARE'S BAYSHORE BYWAY

MAP INDEX

| FIGURE | DISCOVERY ZONE |
|--------|----------------------------------|
| A-1 |New Castle |
| A-2 |Delaware City |
| A-3 |Port Penn |
| A-4 |Odessa |
| A-5 |Cedar Swamp/Blackbird Creek |
| A-6 |Woodland Beach |
| A-7 |Bombay Hook |
| A-8 |Leipsic |
| A-9 |Little Creek |
| A-10 |St. Jones Neck |



Delaware's Bayshore Byway APPENDIX





Figure A-1



Delaware's Bayshore Byway APPENDIX





Figure A-2



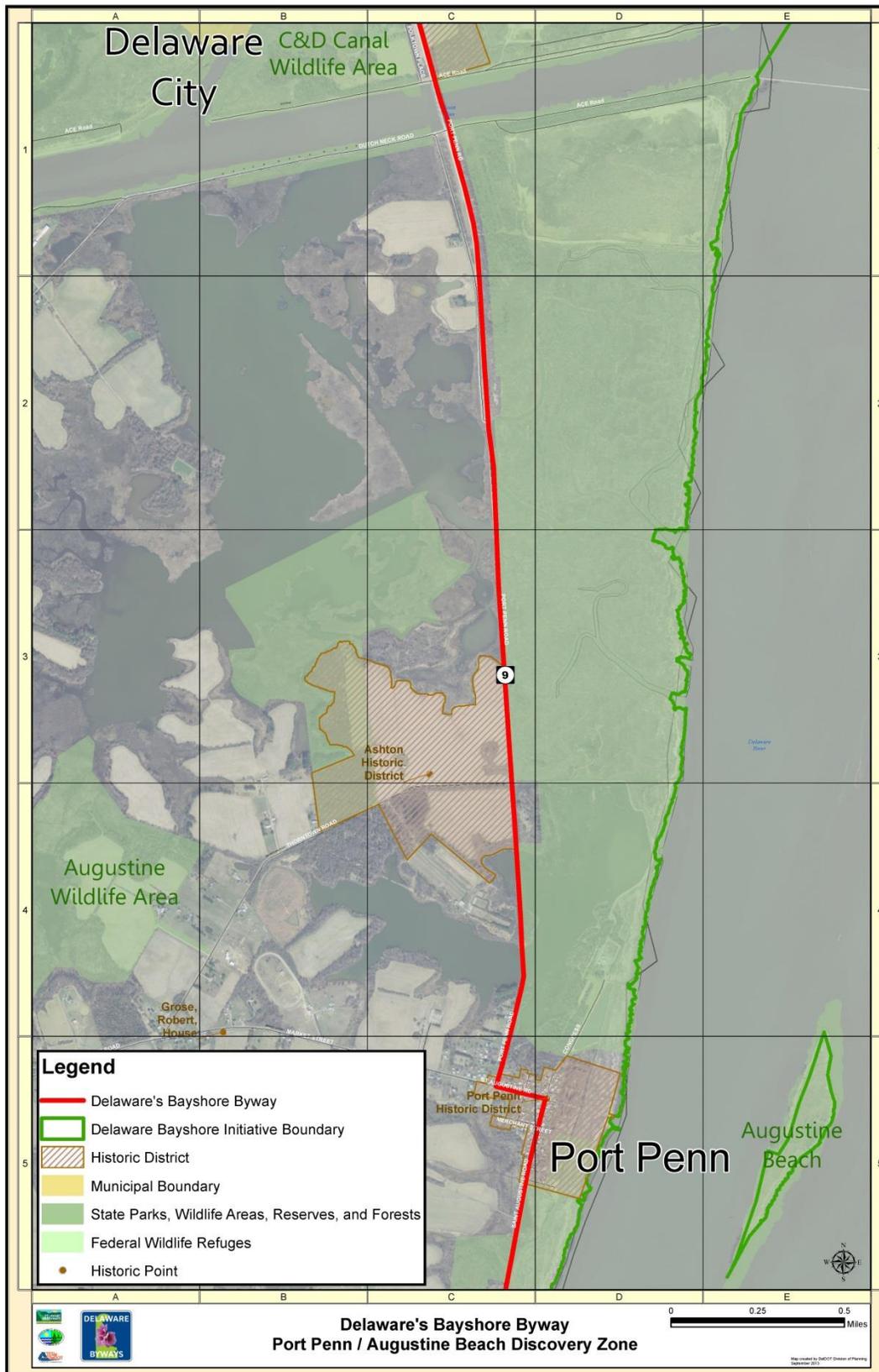


Figure A-3



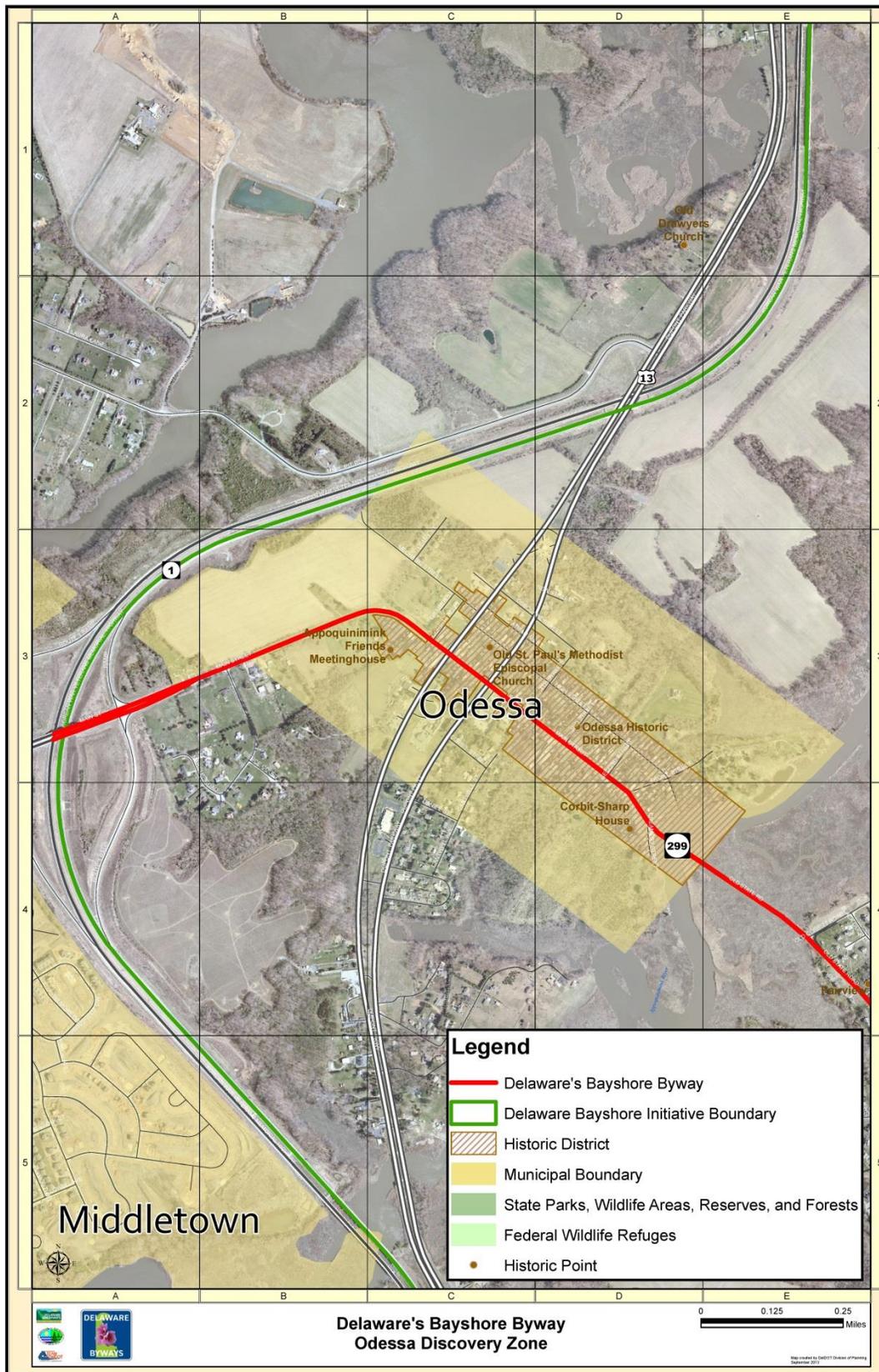


Figure A-4



Delaware's Bayshore Byway APPENDIX



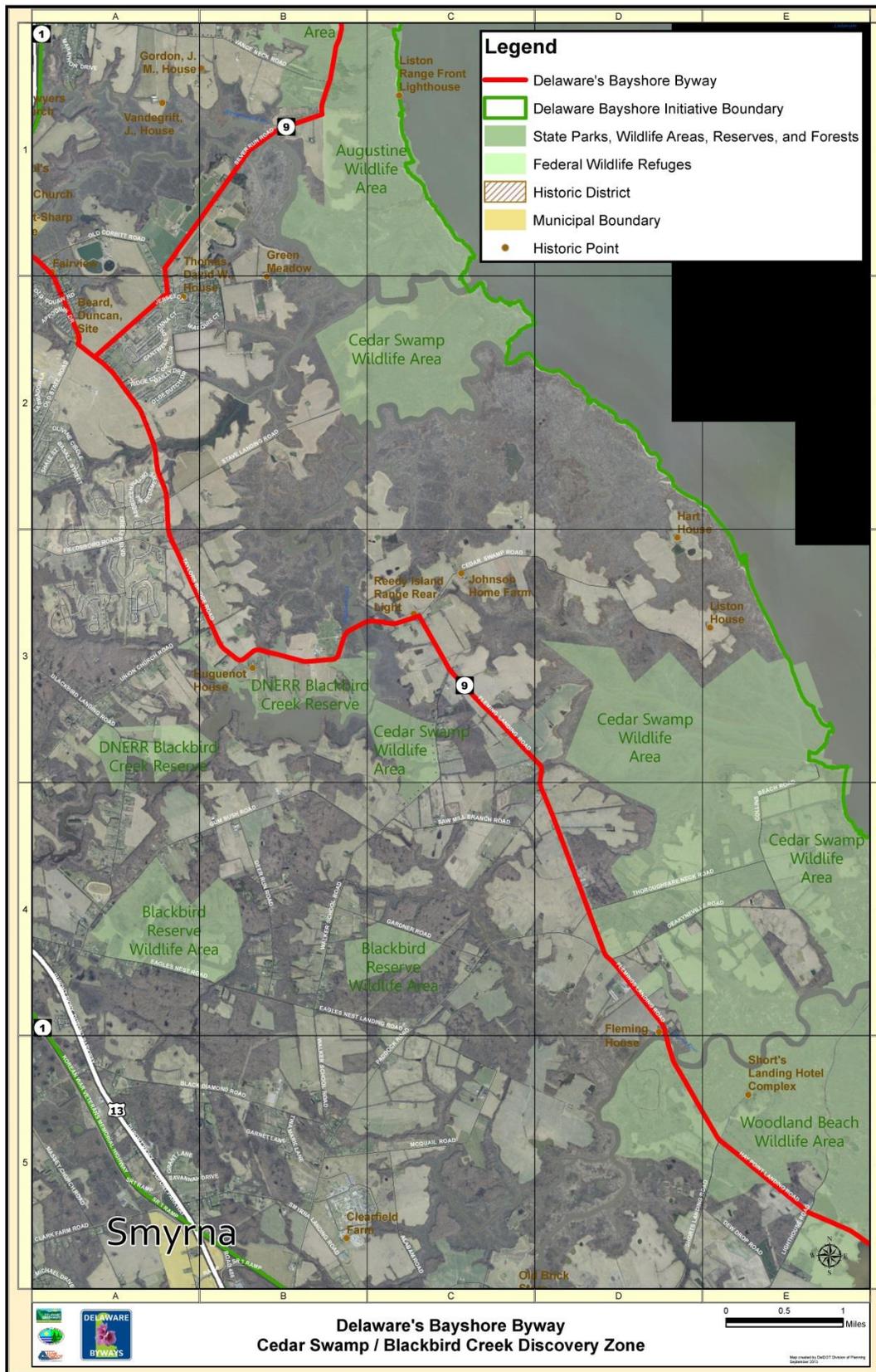


Figure A-5



Delaware's Bayshore Byway APPENDIX



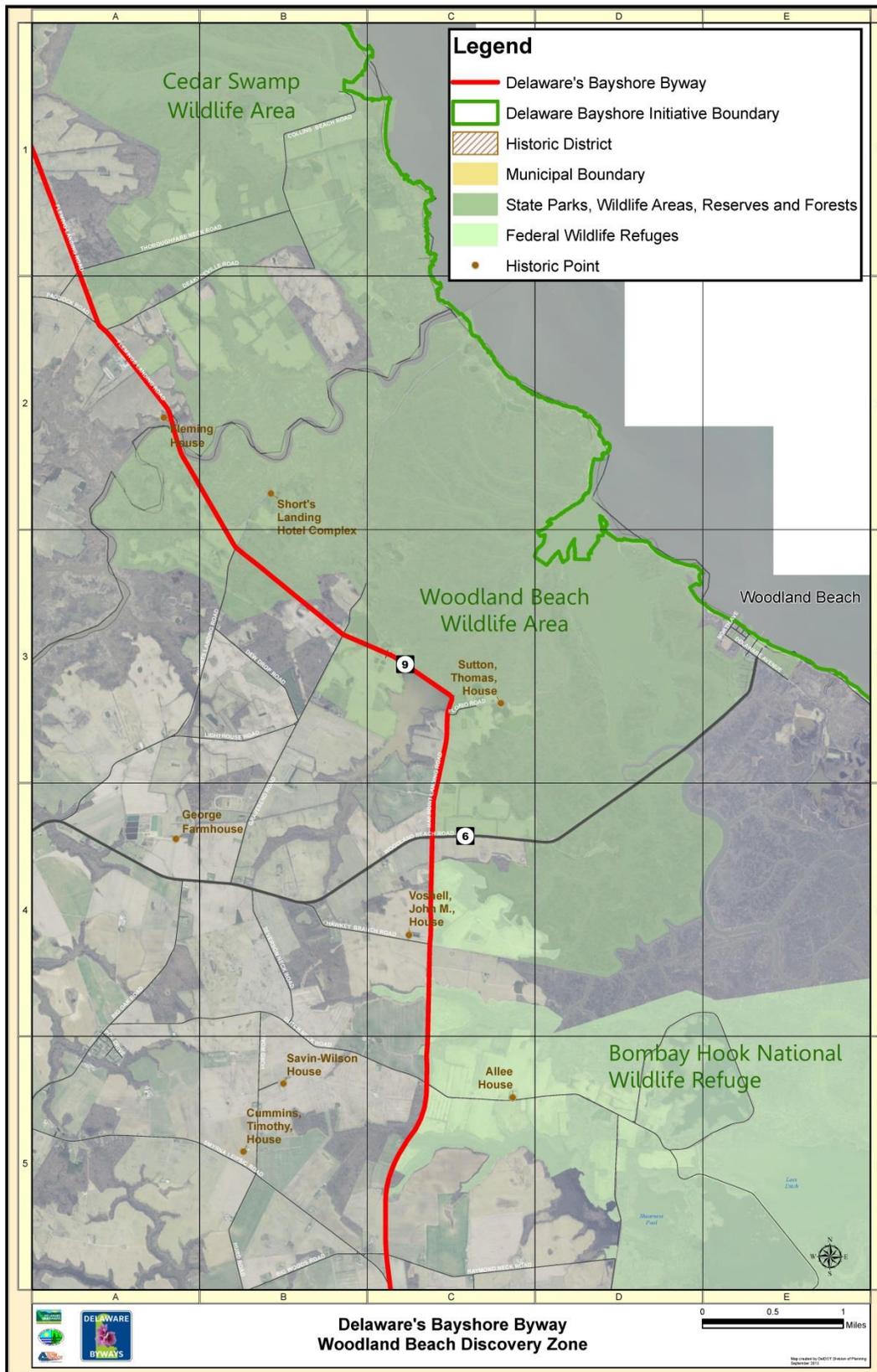


Figure A-6



Delaware's Bayshore Byway APPENDIX



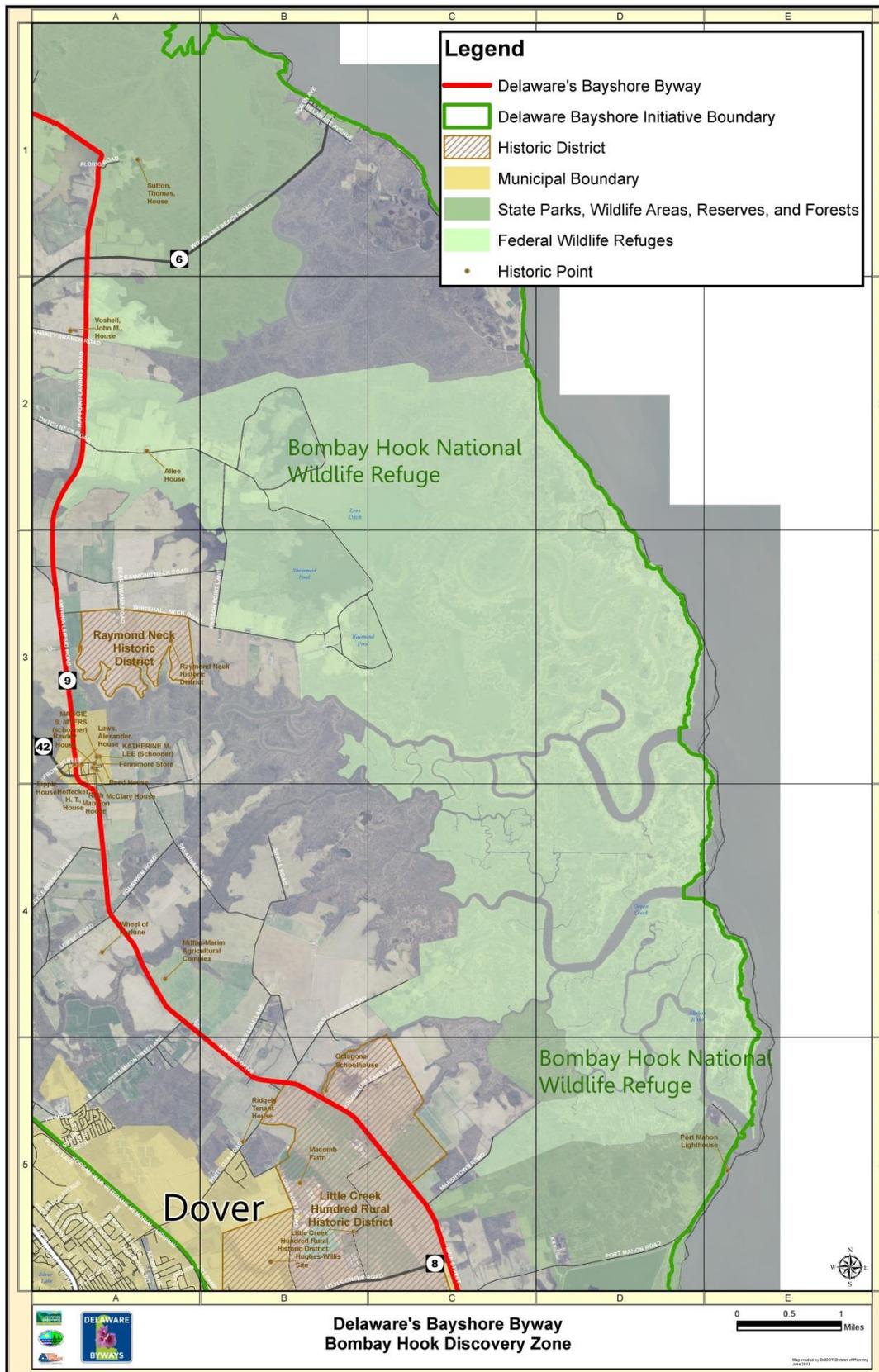


Figure A-7



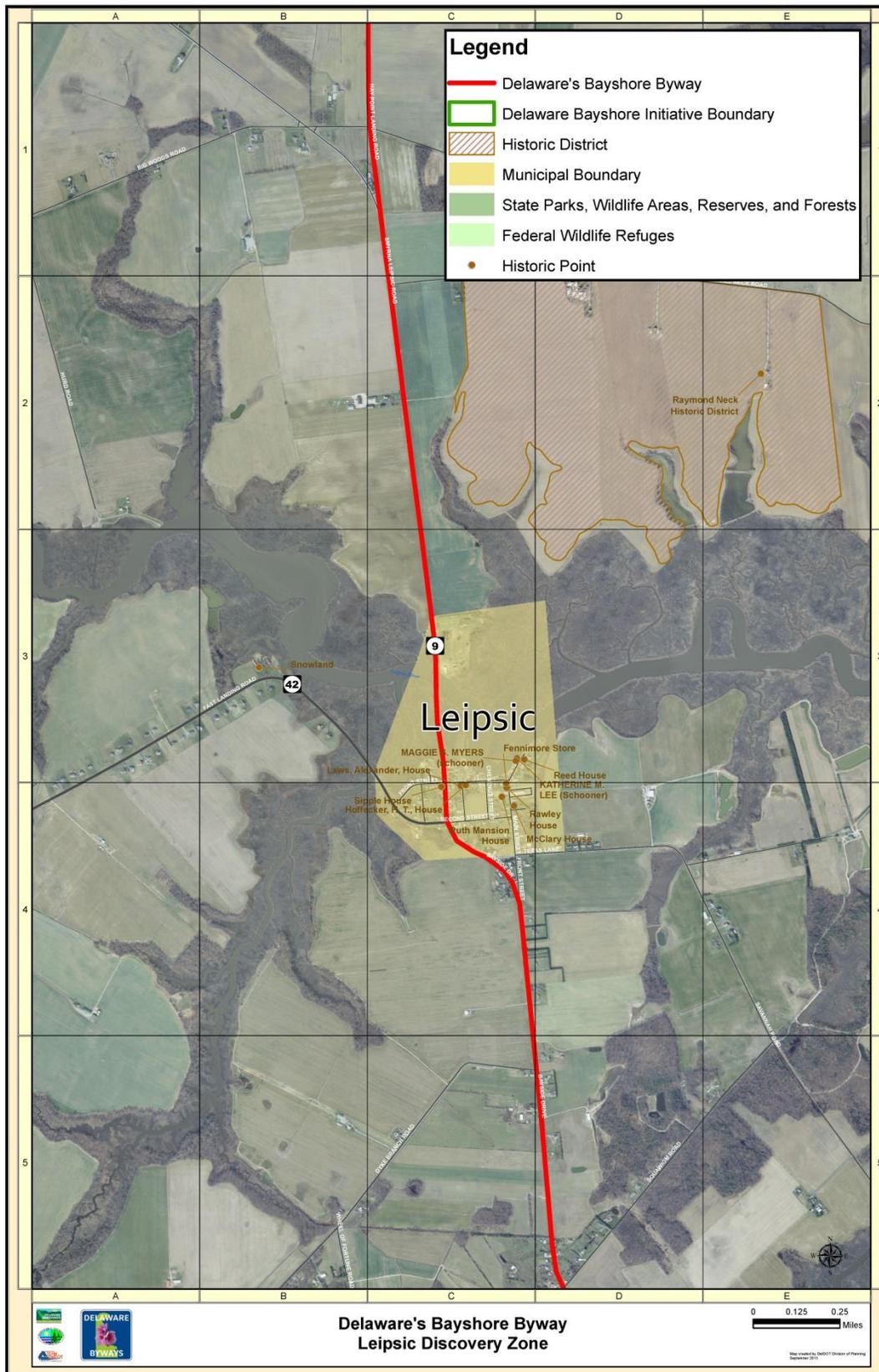


Figure A-8



Delaware's Bayshore Byway APPENDIX



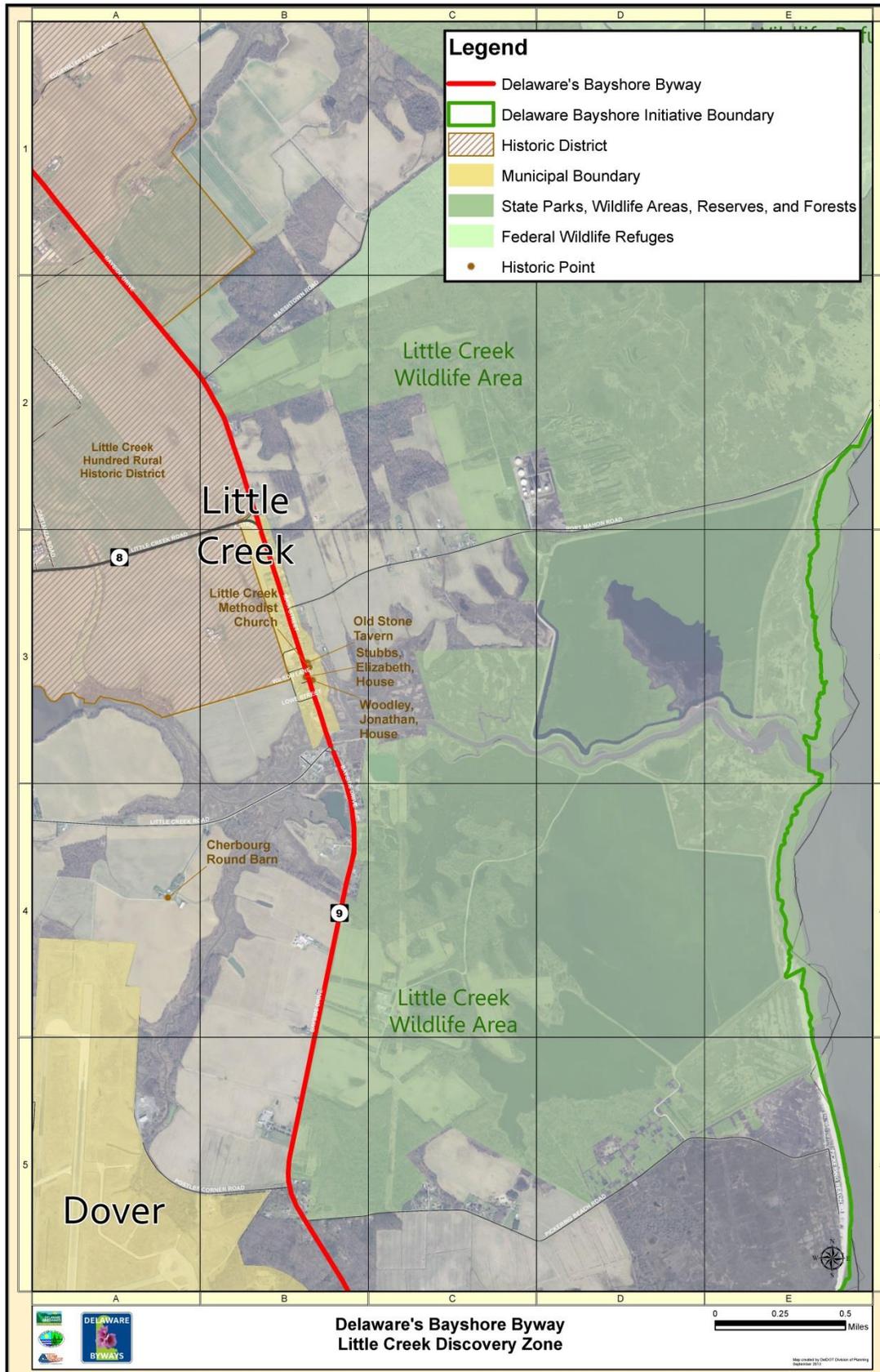


Figure A-9



Delaware's Bayshore Byway APPENDIX



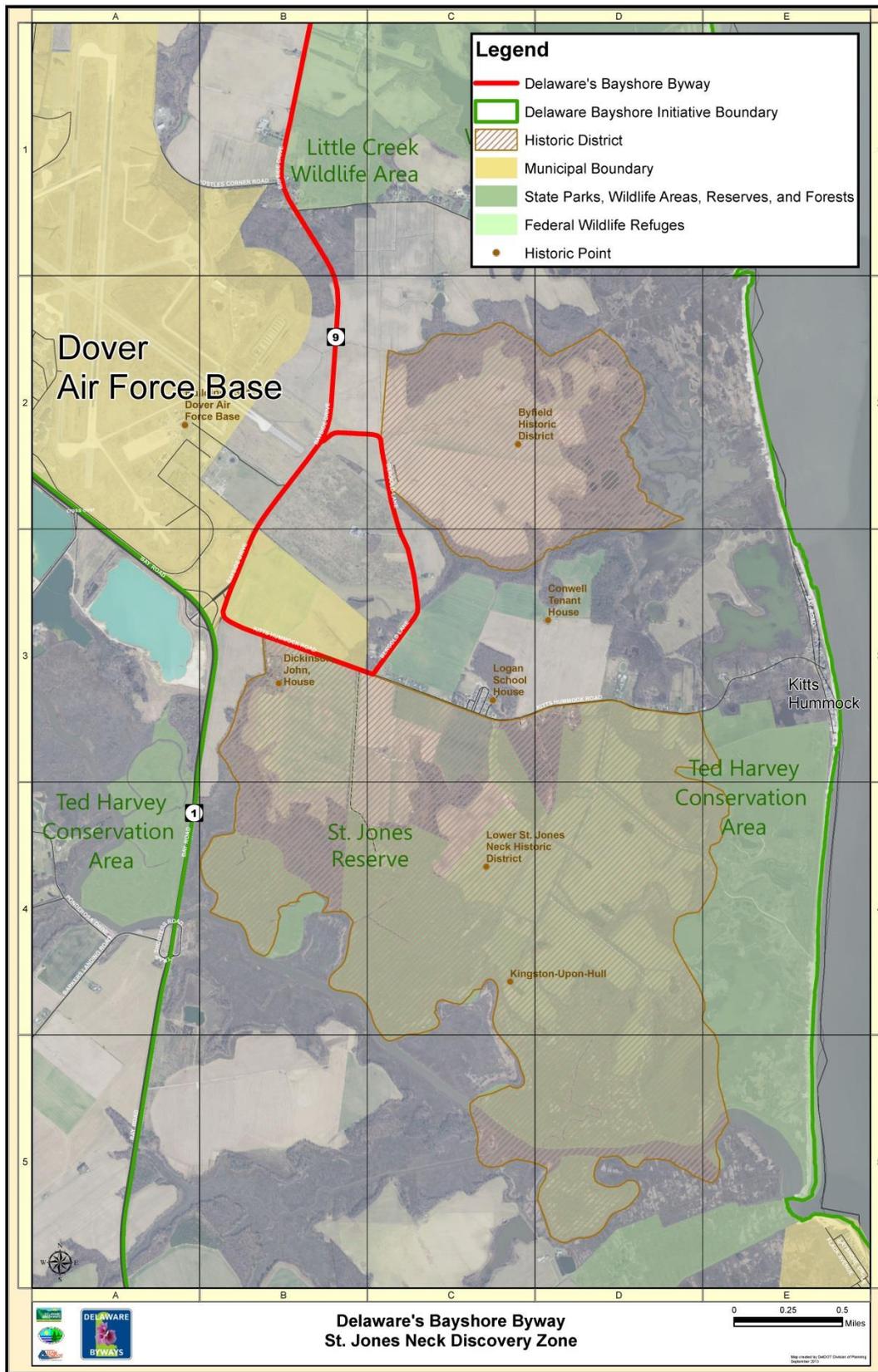


Figure A-10



APPENDIX 4

REVIEW OF SIGNIFICANT PLANNING DOCUMENTS

The following table is a review of significant planning documents that will guide planning for Delaware's Bayshore Byway in the coming years.

| Survey Element | Significant Document Review Key to Symbols ✓ Plans or actions in support of the byway vision ○ Partial undertaking of plans or actions in support of the byway vision ➤ Other resources that support the byway vision |
|------------------------------|---|
| 1. Federal | <ul style="list-style-type: none"> ✓ A proposal for the Delaware National Coastal Heritage Park ✓ America's Great Outdoors: A Promise to Future Generations Report, February 2011 ✓ Bombay Hook National Wildlife Refuge Comprehensive Conservation Plan 2013 Update ✓ Delaware National Coastal Special Resource Study and Environmental Assessment, November 2008, National Park Service ➤ National Wildlife Refuge Visitor Survey 2010/2011, Bombay Hook National Wildlife Refuge |
| 2. State Regulations | <ul style="list-style-type: none"> ○ Delaware's Coastal Zone Act and Regulations Governing Delaware's Coastal Zone |
| 3. State Plans | <ul style="list-style-type: none"> ○ Delaware Strategies for State Policies and Spending, 2010 |
| 4. Master and Regional Plans | <ul style="list-style-type: none"> ✓ New Castle County 2012 Comprehensive Plan Update ○ Fort DuPont Master Plan ○ 2007 Kent County Comprehensive Plan, Adopted October 7, 2008 ○ Kent County Parks & Recreation Strategic Plan 2011 |
| 5. Town Plans | <ul style="list-style-type: none"> ○ City of New Castle Comprehensive Plan 2009 Update ○ Delaware City Comprehensive Plan, December 2008 to be updated in 2013 ✓ Delaware City Eco-Tourism Project: Draft Ecological Assessment and Restoration Concept Report ✓ Fort DuPont Master Plan 2012 ○ Leipsic Comprehensive Plan 2006 ○ Little Creek Comprehensive Plan 2006 |

| Survey Element | Significant Document Review |
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| 6. Environmental Resource Plans, Reports and Regulations | <p>Key to Symbols</p> <ul style="list-style-type: none"> ✓ Plans or actions in support of the byway vision ○ Partial undertaking of plans or actions in support of the byway vision ➤ Other resources that support the byway vision <ul style="list-style-type: none"> ✓ Delaware Wildlife Action Plan 2007-2017, DNREC ✓ Blackbird Creek Reserve, Ecological Restoration Master Plan, March 2007 ➤ Partnership for the Delaware Estuary and Delaware Bay Estuary Project ➤ Delaware National Estuarine Research Reserve Management Plan 2004-2009 ✓ Delaware Shorebird Conservation Plan Ver 1.0, 2008 |
| 7. Recreational Plans and Resources | <ul style="list-style-type: none"> ✓ Delaware Birding Trail – Map and Guide ✓ Delaware State Comprehensive Outdoor Recreation Plan 2009-2011 |
| 8. Historic Preservation Resources and Plans | <ul style="list-style-type: none"> ➤ National Cooperative Highway Research Program, Transportation Research Board, Design and Management of Historic Roads ✓ Delaware's Historic Preservation Plan 2008-2012 ✓ City of New Castle Historic Area, Guidelines and Standards Handbook, May 1990 |
| 9. Conservation Easements/ Farmland Preservation | <ul style="list-style-type: none"> ✓ Current Situation Report for May 16, 2012, Delaware Agricultural Lands Preservation Foundation ➤ Department of Agriculture's Land Preservation Foundation ✓ DNREC Conservation Easements within the Byway corridor |
| 10. Water Resources and Floodplains | <ul style="list-style-type: none"> ✓ Delaware City Floodplain Ordinance ✓ Sea-level Rise (SLR) Vulnerability Assessment / Adaptation Plan |
| 11. Economic Development | <ul style="list-style-type: none"> ○ Official Economic Development and Business Guide ○ NCC Sowing Seeds Growing Jobs Program, Presentation to New Castle County Council ➤ The Economics Associated with Natural Areas in the Delmarva Peninsula. ➤ US Fish and Wildlife Service National Survey of Hunting, Fishing and Wildlife-Associated Recreation – Delaware 2011 ✓ Economic Value of the Delaware Estuary Watershed 2011 |
| 12. Sign Ordinance/ Billboard Control | <ul style="list-style-type: none"> ✓ Delaware Scenic & Historic Highways Program Guide, DelDOT |
| 13. Transportation | <ul style="list-style-type: none"> ✓ New Castle County Bicycle Map, DelDOT 2011 ✓ Kent County Bicycle Map, DelDOT 2011 ○ Delaware River and Bay Authority, Strategic Plan and Capital Improvement Program ➤ New Castle Industrial Track Trail SR 273 (Delaware Street) Crossing Report, DelDOT, June 21, 2012 ➤ Finding of No Significant Impact, Chesapeake and Delaware (C&D) Canal Trail Project and C&D Trail Phasing Map ✓ Delaware City Transportation Plan ○ New Castle County Transportation Plans |

DELAWARE'S BAYSHORE BYWAY

